1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
4	0003980769	ENGINEERING RELEASED	2015-03-27

N66 MLB - DVT_AD

LAST_MODIFICATION=Sun NOV 18 18:50:11 2015

SCH 051-33994
BRD 820-28040
MCO 056-00472

BOM 639-00299 (BETTER)
BOM 639-00301 (ULTRA)
BOM 639-00302 (SUPREME)
BOM 639-01063 (BETTER, RF2)
BOM 639-01064 (ULTRA, RF2)
BOM 639-01065 (SUPREME, RF2)
BOM 639-01116 (BETTER, RFC)
BOM 639-01117 (ULTRA, RFC)
BOM 639-01118 (SUPREME, RFC)

BOM 639-01119 (BETTER, M)
BOM 639-01122 (ULTRA, M)
BOM 639-01125 (SUPREME, M)
BOM 639-01120 (BETTER, RF2, M)
BOM 639-01123 (ULTRA, RF2, M)
BOM 639-01126 (SUPREME, RF2, M)
BOM 639-01121 (BETTER, RFC, M)
BOM 639-01124 (ULTRA, RFC, M)
BOM 639-01127 (SUPREME, RFC, M)

Active Diode Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
376S00106	376S00047	ALTERNATE	Q2300	DIODES INC. ACT DIODE

NAND BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00039	1	NAND,T,B0,1Y,MLC,16GX8,S3E,WLGA70	U1500	CRITICAL	NAND_16G
335S00040	1	NAND,T,B0,1Y,MLC,64GX8,S3E,VLGA70	U1500	CRITICAL	NAND_64G
335S00079	1	NAND,H,B0,1Y,TLC,128GX8,S3E,VLGA70	U1500	CRITICAL	NAND_128G

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00074	335S00039	ALTERNATE	U1500	H, B0, 1Y, MLC, 16Gx8
335S00075	335S00040	ALTERNATE	U1500	H, B0, 1Y, MLC, 64Gx8
335S00078	335S00040	ALTERNATE	U1500	H, B0, 1Y, TLC, 64Gx8
335S00082	335S00040	ALTERNATE	U1500	T, B0, 1Z, TLC, 64Gx8
335S00064	335S00040	ALTERNATE	U1500	S, B0, 1Z, TLC, 64Gx8
335S00083	335S00079	ALTERNATE	U1500	T, B0, 1Z, TLC, 128Gx8
335S00065	335S00079	ALTERNATE	U1500	S, B0, 1Z, TLC, 128Gx8

Carbon BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338S1163	1	DISCRETE ACCEL, BOSCH	U3030	CRITICAL	NOSTUFF
338S1163	1	DISCRETE ACCEL, BOSCH	U3030	CRITICAL	CARBON_INVENSENSE
338S00017	1	CARBON, INVENSENSE	U3010	CRITICAL	CARBON_INVENSENSE
132S0395	1	C3013, 0.1UF, INVENSENSE OPTION	C3013	CRITICAL	CARBON_INVENSENSE
338S00029	1	CARBON, ST	U3010	CRITICAL	CARBON_ST
132S0391	1	C3013, 0.01UF, ST OPTION	C3013	CRITICAL	CARBON_ST
338S00087	1	CARBON, INVENSENSE MPU-6800	U3010	CRITICAL	CARBON_INVENSENSE_6800
132S0395	1	C3013, 0.1UF, INVENSENSE OPTION	C3013	CRITICAL	CARBON_INVENSENSE_6800

Power Inductor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S00117	152S00074	ALTERNATE	$?	IND,PWR,SHLD,1.0 UH,3.6A,0.060 OHM,2016
152S00118	152S00075	ALTERNATE	$?	IND,PWR,SHLD,1.2 UH,3.0A,0.080 OHM,2016
152S00120	152S00077	ALTERNATE	$?	IND,PWR,SHLD,1.0 UH,2.25A,0.150 OHM,2016
152S00121	152S00081	ALTERNATE	$?	IND,PWR,SHLD,0.47 UH,3.9A,0.040 OHM,2012
152S00123	152S1936	ALTERNATE	$?	IND,PWR,SHLD,15 UH,0.71A,0.900 OHM,3225
152S2052	152S1929	ALTERNATE	$?	IND,MULT,1UH,1.2A,0.320 OHM,0603

SIM Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
512S00013	1	SIM, Integrated Eject, N66	J3001_RF	CRITICAL	COMMON

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
512S00015	512S00013	ALTERNATE	J3001_RF	SIM, INTEGRATED EJECT, N71

NOTE: Revisit for Carrier

Shield Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
613-01503	806-02349	ALTERNATE	SH0500	Upper Front shield
613-01504	806-02350	ALTERNATE	SH0501	Lower Front shield
806-02655	806-02352	ALTERNATE	SH0503	Upper Back shield
806-03410	806-02352	ALTERNATE	SH0503	Upper Back shield
806-02656	806-02353	ALTERNATE	SH0504	Lower Back shield
806-03411	806-02353	ALTERNATE	SH0504	Lower Back shield

NOTE: Revisit for Carrier

Schematic & PCB Callouts

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-00094	1	SCH,SINGLE_BRD,N66	SCH	CRITICAL	?
820-00040	1	PCBF,SINGLE_BRD,N66	PCB	CRITICAL	?
825-6838	1	EEEE CODE FOR 639-00299	EEEE_G360	CRITICAL	EEEE_BETTER
825-6838	1	EEEE CODE FOR 639-00301	EEEE_G35W	CRITICAL	EEEE_ULTRA
825-6838	1	EEEE CODE FOR 639-00302	EEEE_G35V	CRITICAL	EEEE_SUPREME
825-6838	1	EEEE CODE FOR 639-01063	EEEE_GKKY	CRITICAL	EEEE_BETTER_RF2
825-6838	1	EEEE CODE FOR 639-01064	EEEE_GKL0	CRITICAL	EEEE_ULTRA_RF2
825-6838	1	EEEE CODE FOR 639-01065	EEEE_GKL1	CRITICAL	EEEE_SUPREME_RF2
825-6838	1	EEEE CODE FOR 639-01116	EEEE_GLL7	CRITICAL	EEEE_BETTER_RFC
825-6838	1	EEEE CODE FOR 639-01117	EEEE_GLL4	CRITICAL	EEEE_ULTRA_RFC
825-6838	1	EEEE CODE FOR 639-01118	EEEE_GLL1	CRITICAL	EEEE_SUPREME_RFC
825-6838	1	EEEE CODE FOR 639-01119	EEEE_GLL2	CRITICAL	EEEE_BETTER_M
825-6838	1	EEEE CODE FOR 639-01122	EEEE_GLL3	CRITICAL	EEEE_ULTRA_M
825-6838	1	EEEE CODE FOR 639-01125	EEEE_GLL6	CRITICAL	EEEE_SUPREME_M
825-6838	1	EEEE CODE FOR 639-01120	EEEE_GLL8	CRITICAL	EEEE_BETTER_RF2_M
825-6838	1	EEEE CODE FOR 639-01123	EEEE_GLL0	CRITICAL	EEEE_ULTRA_RF2_M
825-6838	1	EEEE CODE FOR 639-01126	EEEE_GLLC	CRITICAL	EEEE_SUPREME_RF2_M
825-6838	1	EEEE CODE FOR 639-01121	EEEE_GLKY	CRITICAL	EEEE_BETTER_RFC_M
825-6838	1	EEEE CODE FOR 639-01124	EEEE_GLL5	CRITICAL	EEEE_ULTRA_RFC_M
825-6838	1	EEEE CODE FOR 639-01127	EEEE_GLL9	CRITICAL	EEEE_SUPREME_RFC_M

PMU/SOC BOM Options

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
998-01699	1	IC,PMU,ANTIGUA,A0,A1,200UBM,2165B,CSP380	U2000	POR
118S0631	1	RES,MF,100 OHM,1%,1/32W,01005	R0730	POR
131S0307	1	CAP,CER,NP0/C0G,100PF,5%,16V,01005	C0730	POR
339S00057	1	DEV FUSED, H DRAM	U0600	POR

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
998-02438	1	IC,PMU,ANTIGUA,A1,Z2,200UBM,2165B,CSP380	U2000	M
118S00009	1	RES,MF,3.01KOHM,1%,1/32W,01005	R0730	M
131S0307	1	CAP,CER,NP0/C0G,100PF,5%,16V,01005	C0730	NOSTUFF
339S00067	1	M DEV FUSED, M DRAM	U0600	M

Maui AP Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S00058	339S00057	ALTERNATE	U0600	DEV FUSED, M DRAM
339S00059	339S00057	ALTERNATE	U0600	DEV FUSED, S DRAM
339S00068	339S00067	ALTERNATE	U0600	M DEV FUSED, M DRAM

Low Noise Caps

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
138S0867	3	CAP,X5R,10UF,20%,6.3V,0.65MM,HRZTL,0402	C2085, C2086, C2087	CAPS_NORMAL
998-01223	3	CAP,X5R,10UF,20%,6.3V,0.65MM,0402,INTPOSER	C2085, C2086, C2087	CAPS_LOW_NOISE

SEP EEPROM Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00066	335S0946	ALTERNATE	U0900	IC,EEPROM,16KX8,1.8V,I2C,WLCSP4,ONSEMI

Global Capacitor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
118S0764	118S0717	ALTERNATE	?	RES, 3.92K, 0.1%, 0201
138S0702	138S0657	ALTERNATE	?	CAP, X5R, 4.3UF, 4V, 0610
138S00006	138S0835	ALTERNATE	?	CAP, 3-TERM, 4.3UF, 4V, 0402
138S00005	138S00003	ALTERNATE	?	CAP,X5R,1SUF,6.3V,0.65MM,0402,TAIYO
138S00048	138S00003	ALTERNATE	?	CAP,X5R,1SUF,6.3V,0.65MM,0402,KYOCERA
138S0648	138S0652	ALTERNATE	?	CAP,X5R,4.7UF,6.3V,0.65MM,0402,TAIYO
132S0400	132S0436	ALTERNATE	?	CAP,X5R,0.22UF,6.3V,01005,TDK
138S00032	138S0831	ALTERNATE	?	CAP,X5R,2.2UF,6.3V,0201,TAIYO
138S00049	138S0831	ALTERNATE	?	CAP,X5R,2.2UF,6.3V,0201,KYOCERA
138S00024	138S0986	ALTERNATE	?	CAP,C0G,5-TERM,7.5UF,20%,4V,0402,TAIYO/TDK
138S0706	138S0739	ALTERNATE	?	CAP,CER,1UF,20%,10V,X5R,0201,MURATA
138S0945	138S0739	ALTERNATE	?	CAP,CER,1UF,20%,10V,X5R,0201,KYOCERA

Global Ferrite Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S2052	152S1929	ALTERNATE	?	IND, 1UH, 1.2A, 0603
155S0773	155S0453	ALTERNATE	?	FERR, 120OHM, 0.80HM DCR, 01005
155S0653	155S0511	ALTERNATE	?	FERR, 33OHM, 0.090HM DCR, 0201
155S00067	155S0581	ALTERNATE	?	FERR, 240OHM, 0.38OHM DCR, 0201
155S00012	155S00009	ALTERNATE	?	FLTR, 65 OHMS, 0605
155S0960	155S0941	ALTERNATE	?	FERR, 70 OHMS, 01005

Global Varistor Alternates

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
377S0168	377S0140	ALTERNATE	?	VARISTOR, 6.8V, 100PF, 01005

DDR PLL Alternate

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S00095	155S00068	ALTERNATE	FL1280	FERR 8Ω,100OHM,25%,100MA,2OHM,01005

TESTPOINTS

POWER

VOLTAGE=0V — TP00 (TP-P5, ROOM=TEST) — POWER GROUND

32 31 17 PP5V0_USB — TP01 (TP-P55, ROOM=TEST) — VBUS

18 17 PP_BATT_VCC — TP02 (TP-P5, ROOM=TEST) — VBATT

TP03 (TP-P5, ROOM=TEST)

TP04 (TP-P5, ROOM=TEST) — POWER GROUND

RESET

34 16 9 5 PMU_TO_SYSTEM_COLD_RESET_L — PP06 (P4MM-NSM, SM, PP, ROOM=TEST) — SOC & BB RESET

DFU

34 8 FORCE_DFU — TP07 (TP-P55, ROOM=TEST) — FORCE DFU

21 20 17 14 13 12 9 8 7 6 5 3 34 30 PP1V8 — PP07 (P4MM-NSM, SM, PP, ROOM=TEST)

34 8 DFU_STATUS — PP08 (P4MM-NSM, SM, PP, ROOM=TEST)

AMUX

16 PMU_AMUX_AY — TP16 (TP-P55, ROOM=TEST) — ANALOG MUX A OUTPUT

16 PMU_AMUX_BY — TP17 (TP-P55, ROOM=TEST) — ANALOG MUX B OUTPUT

MOJAVE

29 28 MESA_TO_BOOST_EN — TP18 (TP-P55, ROOM=TEST)

29 28 PP16V5_MESA — TP19 (TP-P55, ROOM=TEST)

LCM

30 PP_LCM_BL_CAT1_CONN — TP20 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SINK1

30 PP_LCM_BL_CAT2_CONN — TP21 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SINK2

30 PP_LCM_BL_ANODE_CONN — TP22 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SOURCE

30 PP_LCM_BL_CAT3_CONN — TP23 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SINK3

30 PP_LCM_BL_CAT4_CONN — TP24 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SINK4

30 PP_LCM_BL34_ANODE_CONN — TP25 (TP-P55, ROOM=TEST) — LCM BACKLIGHT SOURCE (3/4)

UAT GND Ring Opening

GND — PP09 (0.50MM, SM, PP, ROOM=TEST)

N66 I2C DEVICE MAP

I2C BUS	DEVICE	BINARY	7-BIT HEX	8-BIT HEX
I2C0	ANTIGUA PMU	1110100X	0X74	0XE8
	CHESTNUT	0100111X	0X27	0X4E
	BACKLIGHT 1	1100011X	0X62	0XC4
I2C1	TIGRIS	1110101X	0X75	0XEA
	ARC DRIVER	1000001X	0X41	0X82
	SPEAKER AMP	1000000X	0X40	0X80
	TRISTAR	0011010X	0X1A	0X34
I2C2	ALS	0101001X	0X29	0X52
	DISP EEPROM	1010001X	0X51	0XA2
	BACKLIGHT 2	1100011X	0X62	0XC4
OWL	UNUSED	N/A	N/A	N/A
ISP I2C0	REAR CAM	TBD	TBD	TBD
	LED DRIVER	1100011X	0X63	0XC6
ISP I2C1	FRONT CAM	0010000X	0X10	0X20
TOUCH I2C	MESON	1000000X	0x40	0x80
	MAMBA	1100000X	0x60	0xC0
	DOPPLER	1011000X	0x58	0xB0
SEP I2C	SEP EEPROM	1010001X	0x51	0xA2

BOOTSTRAPPING:BOARD REV
BOARD ID
BOOT CONFIG

8 BOARD_REV3 — R0400 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K — PP1V8 (1 5 6 7 8 9 12 13 14 17 20 21 30 34)

8 BOARD_REV2 — R0401 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_REV1 — NOSTUFF R0402 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_REV0 — NOSTUFF R0403 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

SELECTED -->

BOARD_REV[3:0]
FLOAT=LOW, PULLUP=HIGH

1111	PROTO1
1110	PROTO2
1101	EVT
1100	EVT-MD
XXXX	CARRIER
XXXX	DVT

8 BOARD_ID4 — NOSTUFF R0404 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_ID3 — NOSTUFF R0405 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_ID2 — R0406 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_ID1 — R0407 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOARD_ID0 — NOSTUFF R0408 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

SELECTED -->

BOARD_ID[4:0]
FLOAT=LOW, PULLUP=HIGH

00100	N71 MLB
00101	N71 DEV
00110	N66 MLB
00111	N66 DEV

8 BOOT_CONFIG2 — NOSTUFF R0409 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOOT_CONFIG1 — R0410 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

8 BOOT_CONFIG0 — R0411 (ROOM=SOC, 01005 MF 5% 1/32W) 1.00K

SELECTED -->

BOOT_CONFIG[2:0]
FLOAT=LOW, PULLUP=HIGH

000	SPI0
001	SPI0 TEST MODE
010	NVME0_X2
011	NVME0 X2 TEST
100	NVME0 X1
101	NVME0 X1 TEST
111	FAST SPI0

E75

32 31 TRISTAR_DP1_CONN_P — TP08 (TP-P5, ROOM=TEST)

32 31 TRISTAR_DP1_CONN_N — TP09 (TP-P5, ROOM=TEST)

32 31 TRISTAR_DP2_CONN_P — TP10 (TP-P5, ROOM=TEST)

32 31 TRISTAR_DP2_CONN_N — TP11 (TP-P5, ROOM=TEST)

32 31 PP_TRISTAR_ACC1 — TP12 (TP-P5, ROOM=TEST)

32 31 PP_TRISTAR_ACC2 — TP13 (TP-P5, ROOM=TEST) — ACCESSORY ID AND POWER

TP14 (TP-P55, ROOM=TEST) — TP IS TO HELP WITH USB SI IN THE FACTORY FIXTURE.

32 31 TRISTAR_CON_DETECT_L — TP15 (TP-P55, ROOM=TEST) — FOR DIAGS

TUBE STANDOFF
860-00177

ROOM=ASSEMBLY
BS0530
STDOFF-2.60D0.648H-TH
1

ROOM=ASSEMBLY
BS0531
STDOFF-2.60D0.648H-TH
1

33 4 NORTH_AC_GND_SCREW

TUBE STANDOFF: STOCKHOLM FEED
860-5189

34 AP_TO_STOCKHOLM_ANT 1

BS0520
STDOFF-2.490D1.4ID-1.25H-SM
ROOM=ASSEMBLY
1

TUBE STANDOFF
860-00176

BS0513
STDOFF-2.60D0.808H
ROOM=ASSEMBLY
1

THREADED STANDOFF
860-00175

BS0510
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

TOP SIDE

THREADED STANDOFF
860-00175

BS0511
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

THREADED STANDOFF
860-00175

BS0512
STDOFF-2.90D0.888H-SM
1
ROOM=ASSEMBLY

PLATED SLOTTED THRU-HOLE
998-00099
CL0502
TH-NSP
1
SL-1.20X0.40-1.50X0.70-NSP

806-02349
SHLD-EMI-UPPER-FRONT-N66
1
SH0500
SM
ROOM=ASSEMBLY

806-02350
SHLD-EMI-LOWER-FRONT-N66
1
SH0501
SM
ROOM=ASSEMBLY

TIGRIS/SPKR INDUCTOR SHIELD

806-02351
SHLD-EMI-SA-N66
1
SH0502
SM
ROOM=ASSEMBLY

SOUTH TUBE STANDOFF
860-00176

BS0500
STDOFF-2.60D0.808H
1
ROOM=ASSEMBLY

MLB NORTH PENINSULA AC CHASSIS SHORT
(BLOCKS DC CURRENT THROUGH COMPASS REGION)

33 4 NORTH_AC_GND_SCREW

C0550
220PF
10%
16V
X7R-CERM
01005
1 2
ROOM=ASSEMBLY

C0551
100PF
5%
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

C0552
100PF
5%
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

C0553
4.7PF
+/-0.1PF
16V
NP0-C0G
01005
1 2
ROOM=ASSEMBLY

TODO: TUNE AC CAPS FOR ANTENNA RF GND

CL0501
SM
1 2 3 4 5

COAX CLIP BRACE
806-02354
CLIP-BRACE-COAX-N66

BOTTOM SIDE

806-02352
SHLD-EMI-UPPER-BACK-N66
1
SH0503
SM
ROOM=ASSEMBLY

DOUBLE COAX CLIP
806-01802
CLIP-RETENTION-COAX-DOUBLE
1
CL0500
SM

806-02353
SHLD-EMI-LOWER-BACK-N66
1
SH0504
SM
ROOM=ASSEMBLY

FIDUCIALS

FD0501
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0503
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0504
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0505
FID
0P5SM1P05Q-NSP
1
ROOM=ASSEMBLY

FD0510
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0511
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0512
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0513
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0514
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0515
FID
0P5SQ-SMP3SQ-NSP
1
ROOM=ASSEMBLY

FD0502
FID
0P5SM1P05Q-NSP
29 28 27 26 25 23 22 17 15 14 34 PP_VCC_MAIN
1
ROOM=ASSEMBLY

MAUI - USB, JTAG, XTAL

VDD12_PLL_LPDP:1.14-1.26V @2mA MAX
VDD12_PLL_SOC: 1.14-1.26V @12mA MAX
VDD12_PLL_CPU: 1.14-1.26V @2mA MAX

PP1V2 — R0600 0.00 5% 1/32W MF 01005 ROOM=SOC — PP1V2_PLL VOLTAGE=1.2V

C0600 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0601 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0602 0.01UF 10% 6.3V X5R 01005 ROOM=SOC
C0603 0.01UF 10% 6.3V X5R 01005 ROOM=SOC
C0612 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC

VDD18_USB: 1.71-1.89V @20mA MAX
VDD18_XTAL:1.62-1.98V @2mA MAX

PP1V8 — FL0610 1KOHM-25%-0.2A 0201 ROOM=SOC — PP1V8_XTAL VOLTAGE=1.8V

C0611 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0610 2.2UF 20% 6.3V X5R-CERM 01005 ROOM=SOC

PP3V3_USB
C0620 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
3.14-3.46V @5mA MAX

AP21 VDD12_UH1_HSIC0
C15 VDD12_UH2_HSIC1
F22 VDD12_PLL_LPDP
U20 VDD12_PLL_SOC
T19 VDD12_PLL_SOC
W19 VDD12_PLL_SOC
AF13 VDD12_PLL_CPU
AL21 VDD18_USB
AN20 VDD33_USB
AL34 VDD18_XTAL

OMIT_TABLE
CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 1 OF 14
ROOM=SOC

AN22 NC — UH1_HSIC0_DATA
AN21 NC — UH1_HSIC0_STB
C16 NC — UH2_HSIC1_DATA
D15 NC — UH2_HSIC1_STB
Y32 — JTAG_SEL
AC32 NC — JTAG_TRST*
AB31 NC — JTAG_TDO
AA32 NC — JTAG_TDI
AB32 — JTAG_TMS
AA31 — JTAG_TCK
AC31 — COLD_RESET*
H33 — CFSB
AR23 — TST_CLKOUT
AN23 — S3E_RESET*
H32 — HOLD_RESET
AF6 — TESTMODE
AL22 — FUSE1_FSRC
AG25 — FUSE2_FSRC

31 SWD_DOCK_BI_AP_SWDIO
31 SWD_DOCK_TO_AP_SWCLK
34 16 9 3 PMU_TO_SYSTEM_COLD_RESET_L
31 28 16 9 PMU_TO_OWL_ACTIVE_READY
16 5 AP_TO_PMU_TEST_CLKOUT
13 AP_TO_NAND_RESET_L

ANALOGMUX_OUT — AP24 — AP_TO_PMU_AMUX_OUT 16

USB_D_P — AT20 — USB_AP_DATA_P 5 31
USB_D_N — AT19 — USB_AP_DATA_N 5 31
USB_VBUS — AP19 — USB_VBUS_DETECT 17
USB_ID — AR19 NC
USB_REXT — AP18 — USB_REXT
R0640 200 1% 1/32W MF 01005 ROOM=SOC
WDOG — Y33 — AP_TO_PMU_WDOG_RESET 16
XI0 — AK35 — XTAL_AP_24M_IN
XO0 — AL35 — XTAL_AP_24M_OUT

R0650 511K 1% 1/32W MF 01005 ROOM=SOC
R0651 0.00 5% 1/32W MF 01005 ROOM=SOC
CRITICAL ROOM=SOC
Y0600 1.60X1.20MM-SM 24.000MHZ-30PPM-9.5PF-60OHM
SOC_24M_O
C0650 12PF 5% 16V C0G CERM 01005 ROOM=SOC
C0651 12PF 5% 16V C0G CERM 01005 ROOM=SOC
AP_XTAL_GND VOLTAGE=0V
PCB: PLACE THIS XW AT U1, NEAR XI/XO
XW0650 SHORT-10L-0.1MM-SM ROOM=SOC

PROBE POINTS

31 5 USB_AP_DATA_P — 1 SM PP — PP0600 P3MM-NSM ROOM=SOC
31 5 USB_AP_DATA_N — 1 SM PP — PP0601 P3MM-NSM ROOM=SOC
16 5 AP_TO_PMU_TEST_CLKOUT — 1 SM PP — PP0610 P3MM-NSM ROOM=SOC

MAUI - PCIE INTERFACES

VDD12_PCIE_REFBUF:1.08-1.26V @50mA MAX
VDD12_PCIE_TXPLL: 1.08-1.32V @10mA MAX
VDD12_PCIE: 1.14-1.26V @115mA MAX
PP1V2

VDD085_PCIE:0.802-TBDV @TBDmA MAX
PP_FIXED

C0740 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC
C0741 1.0UF 20% 6.3V X5R 0201-1 ROOM=SOC
C0742 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0743 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0731 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0752 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0751 1.0UF 20% 6.3V X5R 0201-1 ROOM=SOC
C0750 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SOC

AK28 VDD12_PCIE
AK25 VDD12_PCIE
AL24 VDD12_PCIE
AL27 VDD12_PCIE
AL26 VDD12_PCIE_TXPLL
AA26 VDD12_PCIE_REFBUF
AH28 VDD085_PCIE
AJ25 VDD085_PCIE
AL23 VDD085_PCIE
AJ29 VDD085_PCIE
AL29 VDD085_PCIE
AJ24 VDD085_PCIE
AK27 VDD085_PCIE
AJ27 VDD085_PCIE

PCIE EXT C — AP29 PCIE_EXT_C

OMIT_TABLE
CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 2 OF 14
ROOM=SOC

PCIE LINK 0

PCIE_NAND_TO_AP_RXD0_P	C0701 0.1UF	PCIE_NAND_TO_AP_RXD0_C_P	AM30	PCIE_RX0_P
PCIE_NAND_TO_AP_RXD0_N	C0702 0.1UF	PCIE_NAND_TO_AP_RXD0_C_N	AN30	PCIE_RX0_N
PCIE_AP_TO_NAND_TXD0_P	C0703 0.1UF	PCIE_AP_TO_NAND_TXD0_C_P	AT32	PCIE_TX0_P
PCIE_AP_TO_NAND_TXD0_N	C0704 0.1UF	PCIE_AP_TO_NAND_TXD0_C_N	AR32	PCIE_TX0_N
PCIE_NAND_TO_AP_RXD1_P	C0705 0.1UF	PCIE_NAND_TO_AP_RXD1_C_P	AM28	PCIE_RX1_P
PCIE_NAND_TO_AP_RXD1_N	C0706 0.1UF	PCIE_NAND_TO_AP_RXD1_C_N	AN28	PCIE_RX1_N
PCIE_AP_TO_NAND_TXD1_P	C0707 0.1UF	PCIE_AP_TO_NAND_TXD1_C_P	AT31	PCIE_TX1_P
PCIE_AP_TO_NAND_TXD1_N	C0708 0.1UF	PCIE_AP_TO_NAND_TXD1_C_N	AR31	PCIE_TX1_N

PCIE LINK 1

PCIE_WLAN_TO_AP_RXD_P	C0709 0.1UF	PCIE_WLAN_TO_AP_RXD_C_P	AM27	PCIE_RX2_P
PCIE_WLAN_TO_AP_RXD_N	C0710 0.1UF	PCIE_WLAN_TO_AP_RXD_C_N	AN27	PCIE_RX2_N
PCIE_AP_TO_WLAN_TXD_P	C0711 0.1UF	PCIE_AP_TO_WLAN_TXD_C_P	AT28	PCIE_TX2_P
PCIE_AP_TO_WLAN_TXD_N	C0712 0.1UF	PCIE_AP_TO_WLAN_TXD_C_N	AR28	PCIE_TX2_N

PCIE LINK 2

PCIE_BB_TO_AP_RXD_P	C0715 0.1UF	PCIE_BB_TO_AP_RXD_C_P	AM26	PCIE_RX3_P
PCIE_BB_TO_AP_RXD_N	C0716 0.1UF	PCIE_BB_TO_AP_RXD_C_N	AN26	PCIE_RX3_N
PCIE_AP_TO_BB_TXD_P	C0717 0.1UF	PCIE_AP_TO_BB_TXD_C_P	AT26	PCIE_TX3_P
PCIE_AP_TO_BB_TXD_N	C0718 0.1UF	PCIE_AP_TO_BB_TXD_C_N	AR26	PCIE_TX3_N

NC AM25 — PCIE_RX4_P
NC AN25 — PCIE_RX4_N
NC AR24 — PCIE_TX4_P
NC AT24 — PCIE_TX4_N

PCIE_REF_CLK0_P	AN35	PCIE_AP_TO_NAND_REFCLK_P
PCIE_REF_CLK0_N	AP35	PCIE_AP_TO_NAND_REFCLK_N
PCIE_REF_CLK1_P	AN34	PCIE_AP_TO_WLAN_REFCLK_P
PCIE_REF_CLK1_N	AP34	PCIE_AP_TO_WLAN_REFCLK_N
PCIE_REF_CLK2_P	AM32	PCIE_AP_TO_BB_REFCLK_P
PCIE_REF_CLK2_N	AN32	PCIE_AP_TO_BB_REFCLK_N
PCIE_REF_CLK3_P	AM31 NC	
PCIE_REF_CLK3_N	AN31 NC	

PP1V8 — NOSTUFF
R0720 100K 5% 1/32W MF 01005 ROOM=SOC
R0721 100K 5% 1/32W MF 01005 ROOM=SOC
R0722 100K 5% 1/32W MF 01005 ROOM=SOC

PCIE_CLKREQ0*	AT11	PCIE_NAND_TO_AP_CLKREQ_L
PCIE_CLKREQ1*	AP12	PCIE_WLAN_TO_AP_CLKREQ_L
PCIE_CLKREQ2*	AR12	PCIE_BB_BI_AP_CLKREQ_L
PCIE_CLKREQ3*	AT12 NC	

PCIE_PERST0*	AR10	PCIE_AP_TO_NAND_RESET_L
PCIE_PERST1*	AT10	PCIE_AP_TO_WLAN_RESET_L
PCIE_PERST2*	AP11	PCIE_AP_TO_BB_RESET_L
PCIE_PERST3*	AR11 NC	

R0700 100K 5% 1/32W MF 01005 ROOM=SOC
R0701 100K 5% 1/32W MF 01005 ROOM=SOC
R0702 100K 5% 1/32W MF 01005 ROOM=SOC

PCIE_EXT_REF_CLK_P	AR33	
PCIE_EXT_REF_CLK_N	AT33	
PCIE_RX_TX_BYPASS_CLK_P	AT29	
PCIE_RX_TX_BYPASS_CLK_N	AR29	

PCIE_RCAL_P — AT30
PCIE_RCAL_N — AR30
PCIE_RCAL_P — OMIT_TABLE R0730 100 1% 1/32W MF 01005 ROOM=SOC — OMIT_TABLE C0730 100PF 5% 10V NP0-C0G 01005 ROOM=SOC — PCIE_RCAL_N

PROBE POINTS

PCIE RX CAPS ARE PLACED CLOSER TO TX DRIVERS
PROBE POINTS ADDED FOR MEASUREMENTS AT RX DRIVER

PCIE_BB_TO_AP_RXD_C_P — PP0706 P3MM-NSM ROOM=SOC
PCIE_BB_TO_AP_RXD_C_N — PP0707 P3MM-NSM ROOM=SOC

MAUI - CAMERA & DISPLAY INTERFACES

0.756-0.893V @11mA MAX
PP_FIXED
C0814 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0801 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
E10 E13 E8 D13 VDD085_MIPI
D10 E7 D8 E11 E14 VDD18_MIPI
1.62-1.98V @23mA MAX
PP1V8
C0802 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC
C0815 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SOC

CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 3 OF 14
ROOM=SOC
OMIT_TABLE

PP1V8
R0804 1.00K 5% 1/32W MF 01005 ROOM=SOC
R0805 1.00K 5% 1/32W MF 01005 ROOM=SOC
R0806 1.00K 5% 1/32W MF 01005 ROOM=SOC
R0807 1.00K 5% 1/32W MF 01005 ROOM=SOC

MIPI_RCAM_TO_AP_DATA0_CONN_P — B8 MIPI0C_DATA0_P
MIPI_RCAM_TO_AP_DATA0_CONN_N — A8 MIPI0C_DATA0_N
MIPI_RCAM_TO_AP_DATA1_CONN_P — A9 MIPI0C_DATA1_P
MIPI_RCAM_TO_AP_DATA1_CONN_N — B9 MIPI0C_DATA1_N
MIPI_RCAM_TO_AP_DATA2_CONN_P — A13 MIPI0C_DATA2_P
MIPI_RCAM_TO_AP_DATA2_CONN_N — B13 MIPI0C_DATA2_N
MIPI_RCAM_TO_AP_DATA3_CONN_P — B14 MIPI0C_DATA3_P
MIPI_RCAM_TO_AP_DATA3_CONN_N — A14 MIPI0C_DATA3_N
MIPI_RCAM_TO_AP_CLK_CONN_P — A12 MIPI0C_CLK_P
MIPI_RCAM_TO_AP_CLK_CONN_N — B12 MIPI0C_CLK_N
RCAM_REXT — D12 MIPI0C_REXT

MIPI_AP_TO_LCM_DATA0_P — A3 MIPID_DATA0_P
MIPI_AP_TO_LCM_DATA0_N — B3 MIPID_DATA0_N
MIPI_AP_TO_LCM_DATA1_P — B4 MIPID_DATA1_P
MIPI_AP_TO_LCM_DATA1_N — A4 MIPID_DATA1_N
MIPI_AP_TO_LCM_DATA2_P — B6 MIPID_DATA2_P
MIPI_AP_TO_LCM_DATA2_N — A6 MIPID_DATA2_N
MIPI_AP_TO_LCM_DATA3_P — A7 MIPID_DATA3_P
MIPI_AP_TO_LCM_DATA3_N — B7 MIPID_DATA3_N
MIPI_AP_TO_LCM_CLK_P — A5 MIPID_CLK_P
MIPI_AP_TO_LCM_CLK_N — B5 MIPID_CLK_N
LCM_REXT — D9 MIPID_REXT

R0801 4.02K 1% 1/32W MF 01005 ROOM=SOC
R0802 4.02K 1% 1/32W MF 01005 ROOM=SOC

ISP_I2C0_SCL — G31 — I2C_ISP_TO_RCAM_SCL
ISP_I2C0_SDA — G32 — I2C_ISP_BI_RCAM_SDA
ISP_I2C1_SCL — F35 — I2C_ISP_TO_FCAM_SCL
ISP_I2C1_SDA — G34 — I2C_ISP_BI_FCAM_SDA

SENSOR0_CLK — D33 — AP_TO_RCAM_CLK_R — R0808 33.2 1% MF 1/32W 01005 ROOM=SOC — AP_TO_RCAM_CLK
SENSOR0_RST — D32 — AP_TO_RCAM_SHUTDOWN_L
SENSOR1_CLK — F33 — AP_TO_FCAM_CLK_R — R0809 33.2 1% MF 1/32W 01005 ROOM=SOC — AP_TO_FCAM_CLK
SENSOR1_RST — E34 — AP_TO_FCAM_SHUTDOWN_L

SENSOR0_ISTRB — D34 — AP_TO_SPHERE_BUCK_EN
SENSOR0_XSHUTDOWN — F32 — AP_TO_STOCKHOLM_DWLD_REQUEST
SENSOR1_ISTRB — C35 — NC
SENSOR1_XSHUTDOWN — C34 — AP_TO_MUON_BL_STROBE_EN
MIPICSI_MUXSEL — G35 — NC
MIPI1C_REXT — D14 — FCAM_REXT

MIPI1C_DATA0_P — B17 — MIPI_FCAM_TO_AP_DATA0_P
MIPI1C_DATA0_N — A17 — MIPI_FCAM_TO_AP_DATA0_N
MIPI1C_DATA1_P — B19 — MIPI_FCAM_TO_AP_DATA1_P
MIPI1C_DATA1_N — A19 — MIPI_FCAM_TO_AP_DATA1_N
MIPI1C_CLK_P — A18 — MIPI_FCAM_TO_AP_CLK_P
MIPI1C_CLK_N — B18 — MIPI_FCAM_TO_AP_CLK_N

R0803 4.02K 1% 1/32W MF 01005 ROOM=SOC

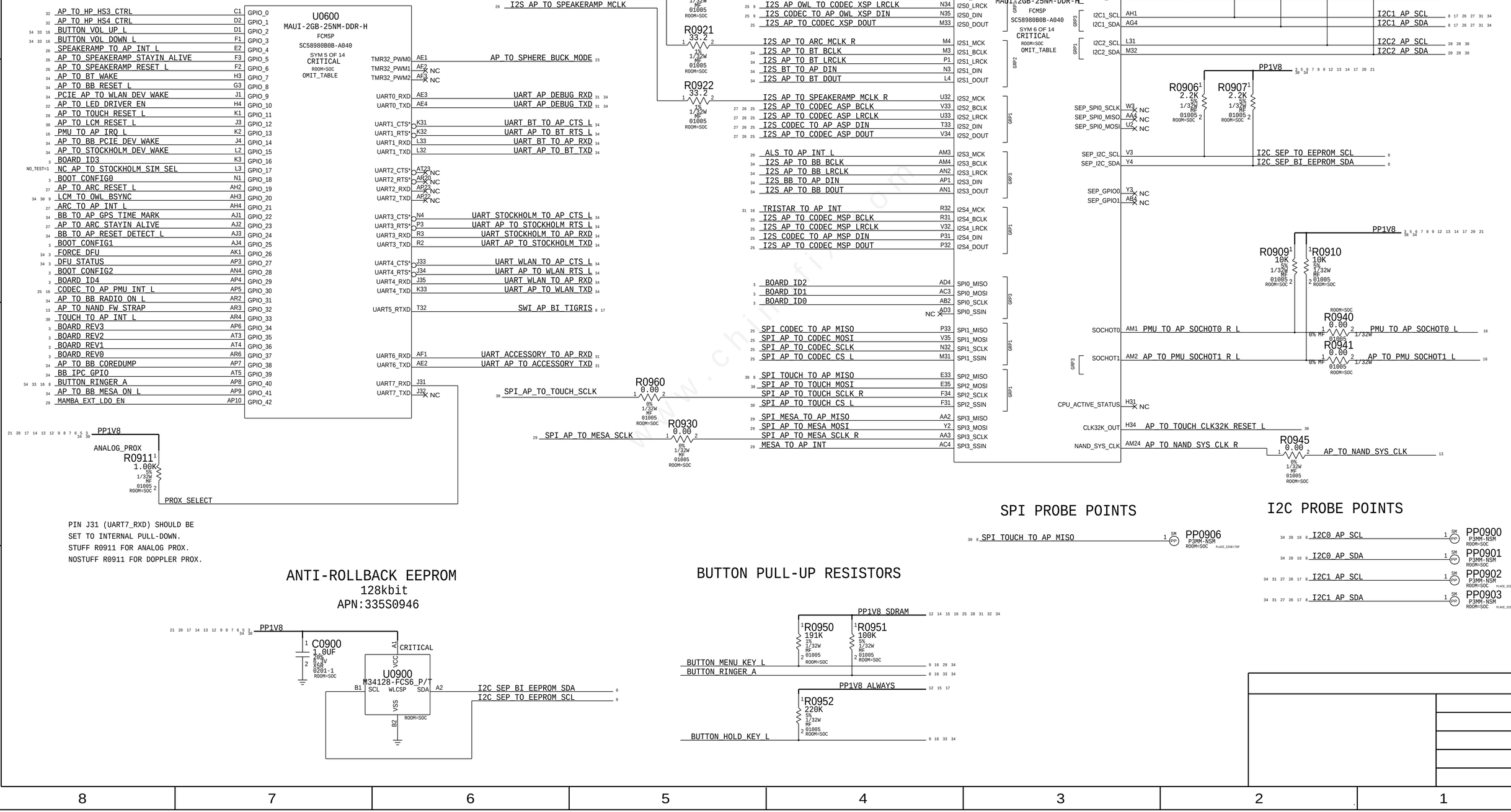
NOTE:VDD12_LPDP SHOULD BE POWERED
EVEN WHEN LPDP IS NOT USED

PP1V2
E23 E25 E27 F24 VDD12_LPDP

CRITICAL
U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 4 OF 14
ROOM=SOC
OMIT_TABLE

NC — A29 LPDP_AUX_P
NC — B29 LPDP_AUX_N
NC — A33 LPDP_TX0_P
NC — B33 LPDP_TX0_N
NC — A32 LPDP_TX1_P
NC — B32 LPDP_TX1_N
NC — A31 LPDP_TX2_P
NC — B31 LPDP_TX2_N
NC — A30 LPDP_TX3_P
NC — B30 LPDP_TX3_N
NC — D24 LPDP_CAL_DRV_OUT
NC — D25 LPDP_CAL_VSS_EXT
NC — AL4 EDP_HPD
NC — J35 DP_WAKEUP

MAUI - GPIO & SERIAL INTERFACES



PIN J31 (UART7_RXD) SHOULD BE
SET TO INTERNAL PULL-DOWN.
STUFF R0911 FOR ANALOG PROX.
NOSTUFF R0911 FOR DOPPLER PROX.

ANTI-ROLLBACK EEPROM

128kbit
APN:335S0946

BUTTON PULL-UP RESISTORS

SPI PROBE POINTS

I2C PROBE POINTS

MAUI - OWL

POWER STATE CONTROL PROBE POINTS

16 9 OWL_TO_PMU_ACTIVE_REQUEST — 1 SM PP — PP1020 P3MM-NSM ROOM=SOC

31 28 16 9 5 PMU_TO_OWL_ACTIVE_READY — 1 SM PP — PP1021 P3MM-NSM ROOM=SOC

16 9 OWL_TO_PMU_SLEEP1_REQUEST — 1 SM PP — PP1022 P3MM-NSM ROOM=SOC

16 11 9 PMU_TO_OWL_SLEEP1_READY — 1 SM PP — PP1023 P3MM-NSM ROOM=SOC

PP1V8 3 5 6 7 8 12 13 14 17 20 21 30 34

NOSTUFF R1002 1.00K 5% 1/32W MF 01005 (1–2)

U0600
MAUI-2GB-25NM-DDR-H
FCMSP
SC58980B0B-A040
SYM 7 OF 14

16 9 OWL_TO_PMU_SLEEP1_REQUEST	AD30	OWL_DDR_REQ	CFSB_AOP	W33	PMU_TO_SYSTEM_COLD_RESET_L 3 5 16 34
16 11 9 PMU_TO_OWL_SLEEP1_READY	AB33	OWL_DDR_RESET*	AWAKE_REQ	AA33	OWL_TO_PMU_ACTIVE_REQUEST 9 16
		CRITICAL ROOM=SOC OMIT_TABLE	AWAKE_RESET*	AD32	PMU_TO_OWL_ACTIVE_READY 5 9 16 28 31
19 SPI_OWL_TO_COMPASS_CS_L	AF35	OWL_FUNC_0	PMGR_MISO	AL2	DWI_PMU_TO_PMGR_MISO 16
19 COMPASS_TO_OWL_INT	AH32	OWL_FUNC_1	PMGR_MOSI	AL1	DWI_PMGR_TO_PMU_BACKLIGHT_MOSI 16 28
19 DISCRETE_ACCEL_TO_OWL_INT2	AG32	OWL_FUNC_2	PMGR_SCLK0	AK4	DWI_PMGR_TO_PMU_SCLK 16
19 ACCEL_GYRO_TO_OWL_INT1	AG31	OWL_FUNC_3	PMGR_SSCLK1	AL3	DWI_PMGR_TO_BACKLIGHT_SCLK 28
19 SPI_OWL_TO_ACCEL_GYRO_CS_L	AG30	OWL_FUNC_4			
19 ACCEL_GYRO_TO_OWL_INT2	AF33	OWL_FUNC_5	RT_CLK32768	AD31	PMU_TO_OWL_CLK32K 16
19 SPI_OWL_TO_PHOSPHOROUS_CS_L	AE34	OWL_FUNC_6			
34 30 8 LCM_TO_OWL_BSYNC	AF34	OWL_FUNC_7	OWL_SWD_TCK_OUT	AE33	SWD_AP_PERIPHERAL_SWCLK 13 34
9 OWL_TO_PMU_SHDN_BI_TIGRIS_SWI	AF31	OWL_FUNC_8	OWL_SWD_TMS0	AD35	NC
19 PHOSPHORUS_TO_OWL_IRQ	AF32	OWL_FUNC_9 EXT OSC IN	OWL_SWD_TMS1	AC33	SWD_AP_BI_BB_SWDIO 34
19 SPI_OWL_TO_DISCRETE_ACCEL_CS_L	AH31	OWL_I2CM_SCL GPO	SWD_TMS2	U31	SWD_AP_BI_NAND_SWDIO 13
19 DISCRETE_ACCEL_TO_OWL_INT1	AH33	OWL_I2CM_SDA	SWD_TMS3	T31	NC
19 SPI_IMU_TO_OWL_MISO	AK31	OWL_SPI_MISO	HOLD_KEY*	U3	BUTTON_HOLD_KEY_L 8 16 33 34
19 SPI_OWL_TO_IMU_MOSI	AK32	OWL_SPI_MOSI GPO	VDD_SOC SKEY*	W4	NC
19 SPI_OWL_TO_IMU_SCLK	AL33	OWL_SPI_SCLK GPO	MENU_KEY*	V4	BUTTON_MENU_KEY_L 8 16 29 34
34 UART_BB_TO_OWL_RXD	AJ32	OWL_UART0_RXD			
34 UART_OWL_TO_BB_TXD	AK33	OWL_UART0_TXD			
34 OWL_TO_WLAN_CONTEXT_B	AH30	OWL_UART1_RXD			
34 OWL_TO_WLAN_CONTEXT_A	AJ31	OWL_UART1_TXD			
30 TOUCH_TO_OWL_ACCEL_DATA_REQUEST	AJ34	OWL_UART2_RXD			
30 UART_OWL_TO_TOUCH_TXD	AJ33	OWL_UART2_TXD			
25 8 I2S_AP_OWL_TO_CODEC_XSP_BCLK	AD34	OWL_I2S_BCLK			
25 8 I2S_CODEC_TO_AP_OWL_XSP_DIN	AA34	OWL_I2S_DIN			
NC	AE32	OWL_I2S_MCK			
25 8 I2S_AP_OWL_TO_CODEC_XSP_LRCLK	AE31	OWL_I2S_LRCK			

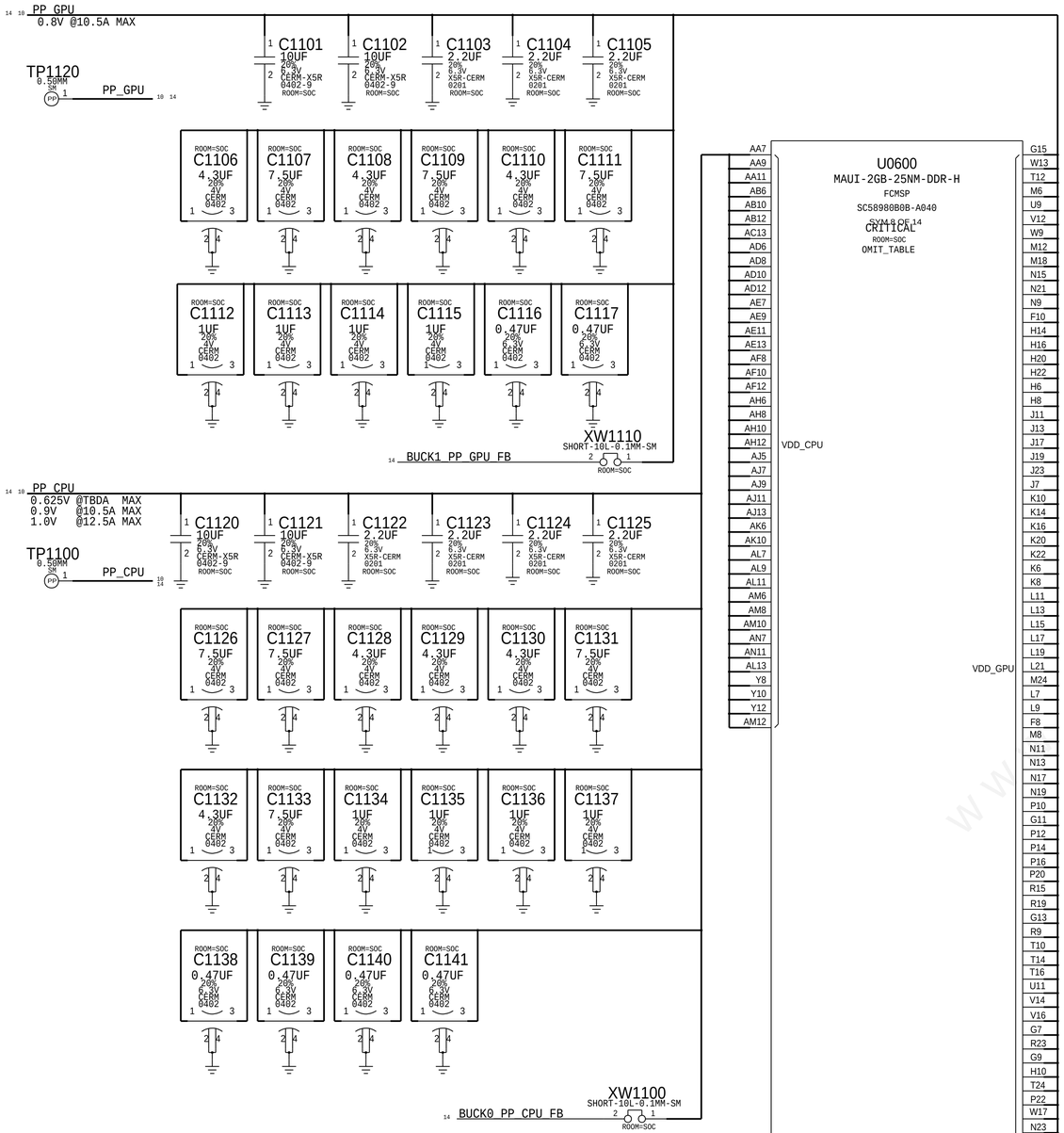
OWL SYSTEM SHUTDOWN OPTION

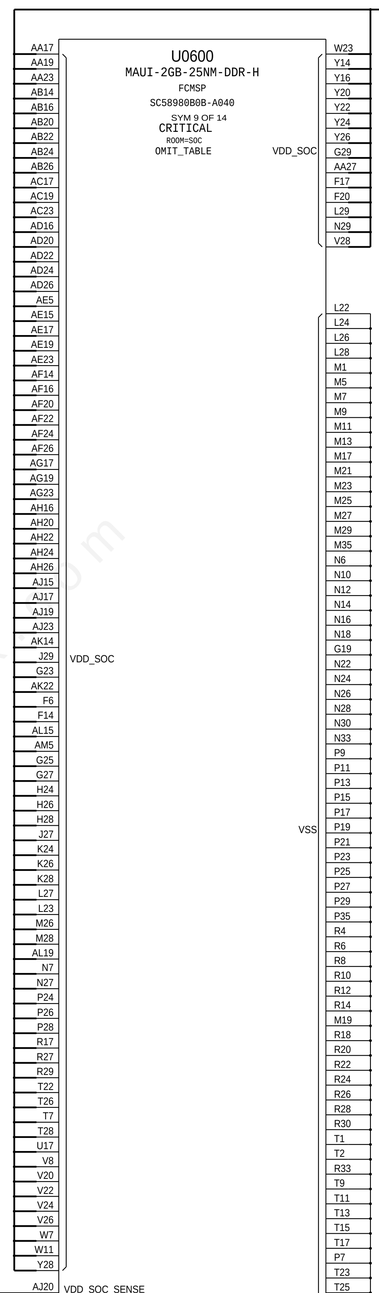
9 OWL_TO_PMU_SHDN_BI_TIGRIS_SWI

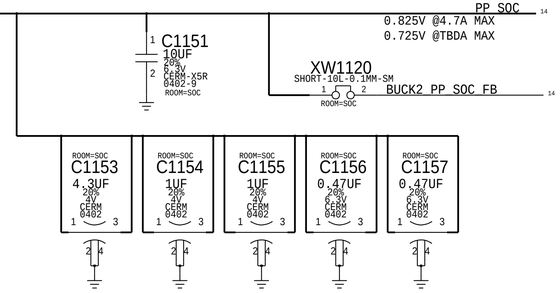
NOSTUFF R1020 10 MF 5% 1/32W 01005 ROOM=SOC (1–2) — SWI_AP_BI_TIGRIS 8 17

NOSTUFF R1021 10 MF 5% 1/32W 01005 ROOM=SOC (1–2) — OWL_TO_PMU_SHDN 16

MAUI - CPU, GPU & SOC RAILS







PP1105 P2MM-NSM — AP_SOC_SENSE_P — AJ20 — VDD_SOC_SENSE

PP1104 P2MM-NSM — AP_SOC_SENSE_N — AK21 — VSS_SOC_SENSE

PP1100 P2MM-NSM — AP_CPU_SENSE_P — Y6 — VDD_CPU_SENSE

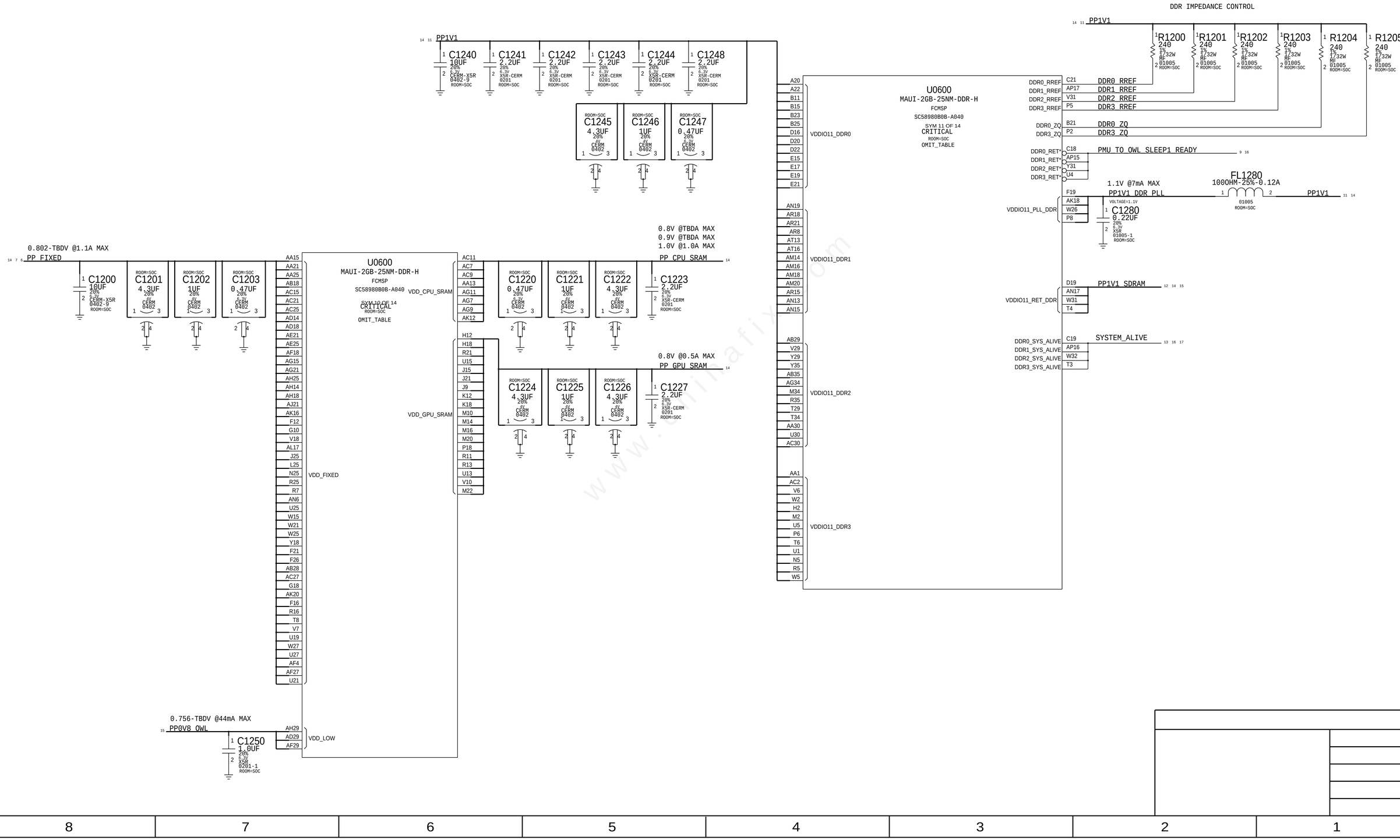
PP1101 P2MM-NSM — AP_CPU_SENSE_N — Y7 — VSS_CPU_SENSE

VDD_GPU_SENSE — G20 — AP_GPU_SENSE_P

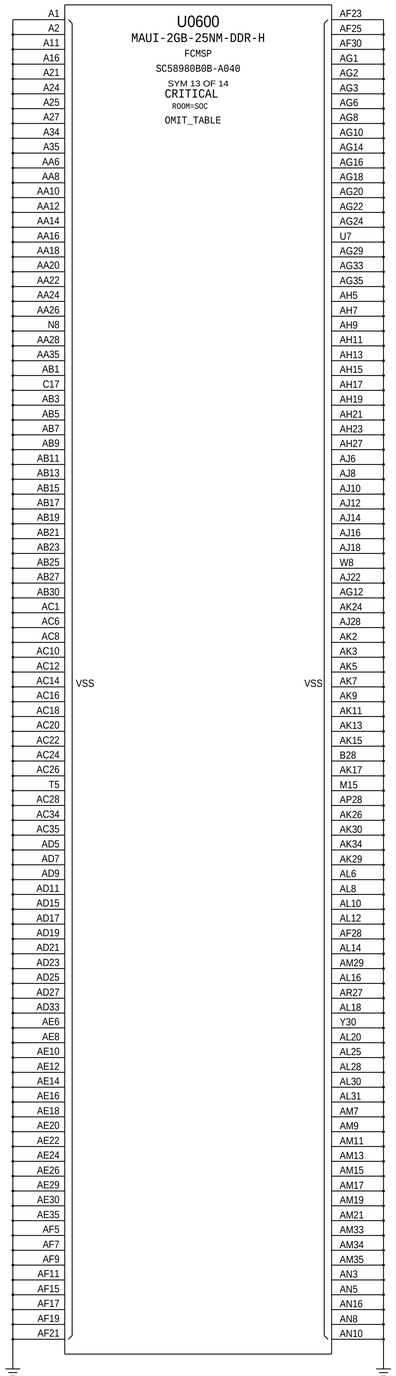
VSS_GPU_SENSE — H19 — AP_GPU_SENSE_N — PP1102 P2MM-NSM

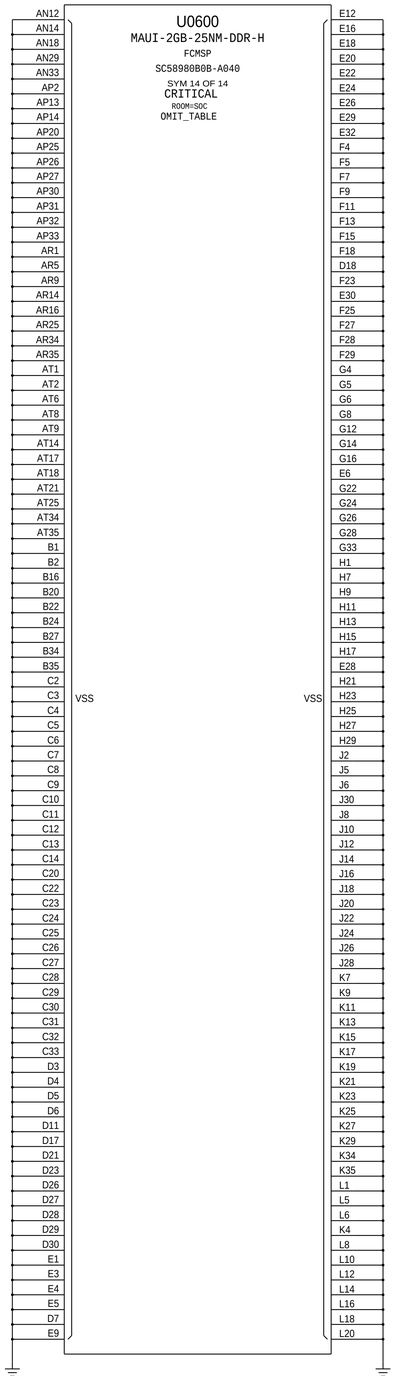
NOTE: AP_GPU_SENSE_P probe location @ R2205.2

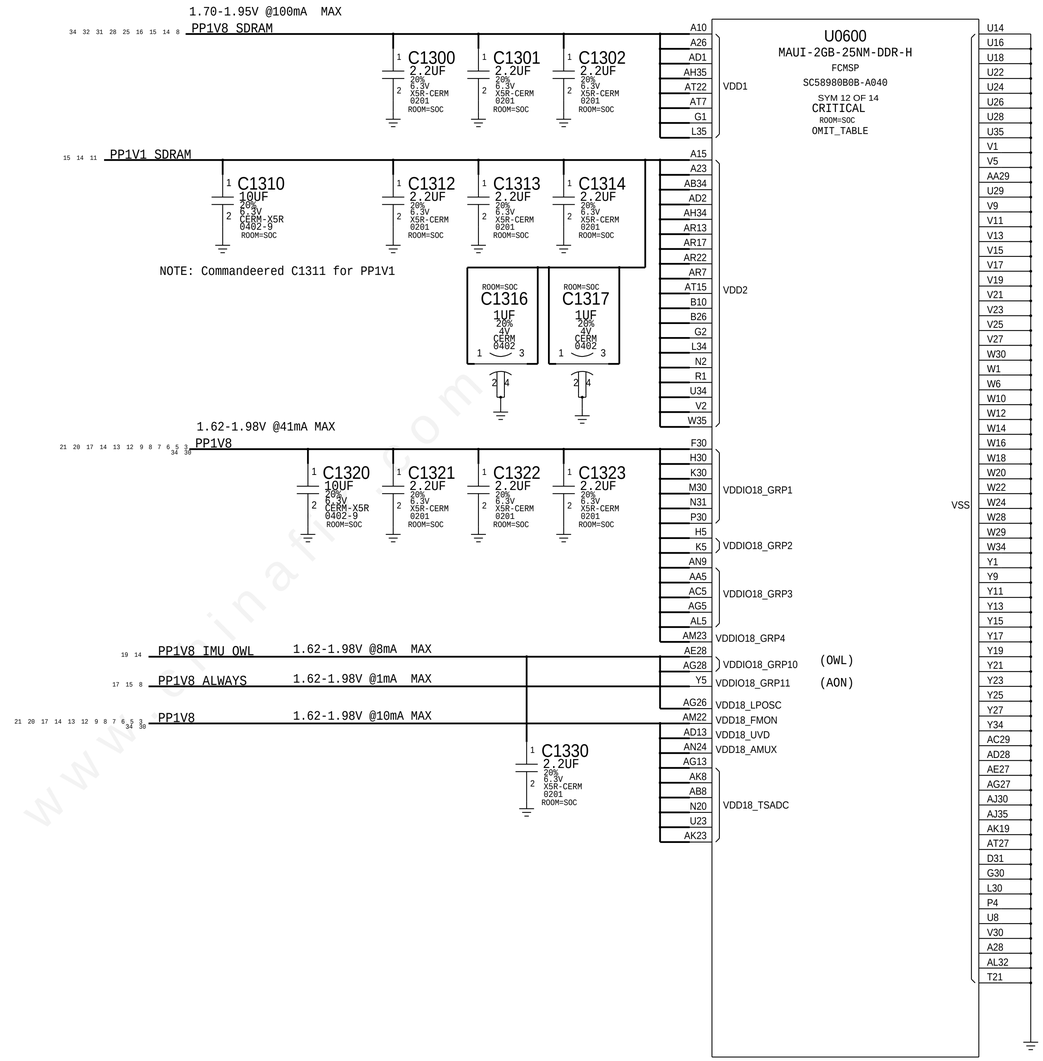
MAUI - POWER SUPPLIES



MAUI - POWER SUPPLIES







S3E NAND

PP1V8
R1530 24.9 1% 1/32W MF 01005 ROOM=NAND
PP1V8_NAND_AVDD VOLTAGE=1.8V
NAND_AGND VOLTAGE=0V
C1532 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1533 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1534 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1535 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1530 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=NAND
C1531 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1527 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1526 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
EXTRA CAPS ADDED FOR UF BLOCKING.
C1520 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1521 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1522 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
C1523 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
C1524 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1525 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1528 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
PP0V9_NAND
C1540 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1541 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1542 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
C1543 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
C1546 1.0UF 20% 6.3V X5R 0201-1 ROOM=NAND
C1547 1.0UF 20% 6.3V X5R 0201-1 ROOM=NAND
EXTRA CAPS ADDED FOR UF BLOCKING.
C1545 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1544 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1548 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=NAND
C1550 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1551 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
C1554 1000PF 10% 6.3V X5R-CERM 01005 ROOM=NAND
C1555 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1556 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1557 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
PP1V8
C1560 0.01UF 10% 6.3V X5R 01005 ROOM=NAND
C1561 0.01UF 10% 6.3V X5R 01005 ROOM=NAND
R1560 10K 1% 1/32W MF 01005 ROOM=NAND NOSTUFF
R1561 10K 1% 1/32W MF 01005 ROOM=NAND NOSTUFF
NAND_VREF
R1501 3.01K 1% 1/20W MF 201 ROOM=NAND
R1500 34.8 0.5% 1/32W MF 01005 ROOM=NAND
PP3V0_NAND
C1501 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1502 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1503 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1504 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1505 15UF 20% 6.3V X5R 0402-1 ROOM=NAND
C1506 1.0UF 20% 6.3V X5R 0201-1 ROOM=NAND
C1509 1.0UF 20% 6.3V X5R 0201-1 ROOM=NAND
C1510 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1511 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=NAND
EXTRA CAPS ADDED FOR UF BLOCKING.
C1507 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1508 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1512 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1513 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1514 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
C1515 100PF 5% 16V NP0-C0G 01005 ROOM=NAND
R1520 0.00 1/32W 0% 01005 MF ROOM=NAND
R1521 0.00 1/32W 0% 01005 MF ROOM=NAND

U1500
THGBX5G9D8KLFXF
VLGA
VER-1 ROOM=NAND
BOMOPTION=OMIT_TABLE CRITICAL

AP_TO_NAND_SYS_CLK → CLK_IN (D2)
PCIE_AP_TO_NAND_REFCLK_P → PCIE_REFCLK_P (H8)
PCIE_AP_TO_NAND_REFCLK_N → PCIE_REFCLK_M (H6)
PCIE_NAND_TO_AP_CLKREQ_L → PCIE_CLKREQ* (G9)
PCIE_NAND_RESREF → PCI_RESREF (M6)
PCIE_AP_TO_NAND_TXD0_P → PCIE_RX0_P (M8)
PCIE_AP_TO_NAND_TXD0_N → PCIE_RX0_M (K8)
PCIE_AP_TO_NAND_TXD1_P → PCIE_RX1_P (N5)
PCIE_AP_TO_NAND_TXD1_N → PCIE_RX1_M (N3)
PCIE_NAND_TO_AP_RXD0_P → PCIE_TX0_P (P8)
PCIE_NAND_TO_AP_RXD0_N → PCIE_TX0_M (N7)
PCIE_NAND_TO_AP_RXD1_P → PCIE_TX1_P (M2)
PCIE_NAND_TO_AP_RXD1_N → PCIE_TX1_M (K2)
AP_TO_NAND_RESET_L → RESET* (F8)
NC → TRST* (D8)
NAND_ZQ → ZQ (D6)
NAND_AGND

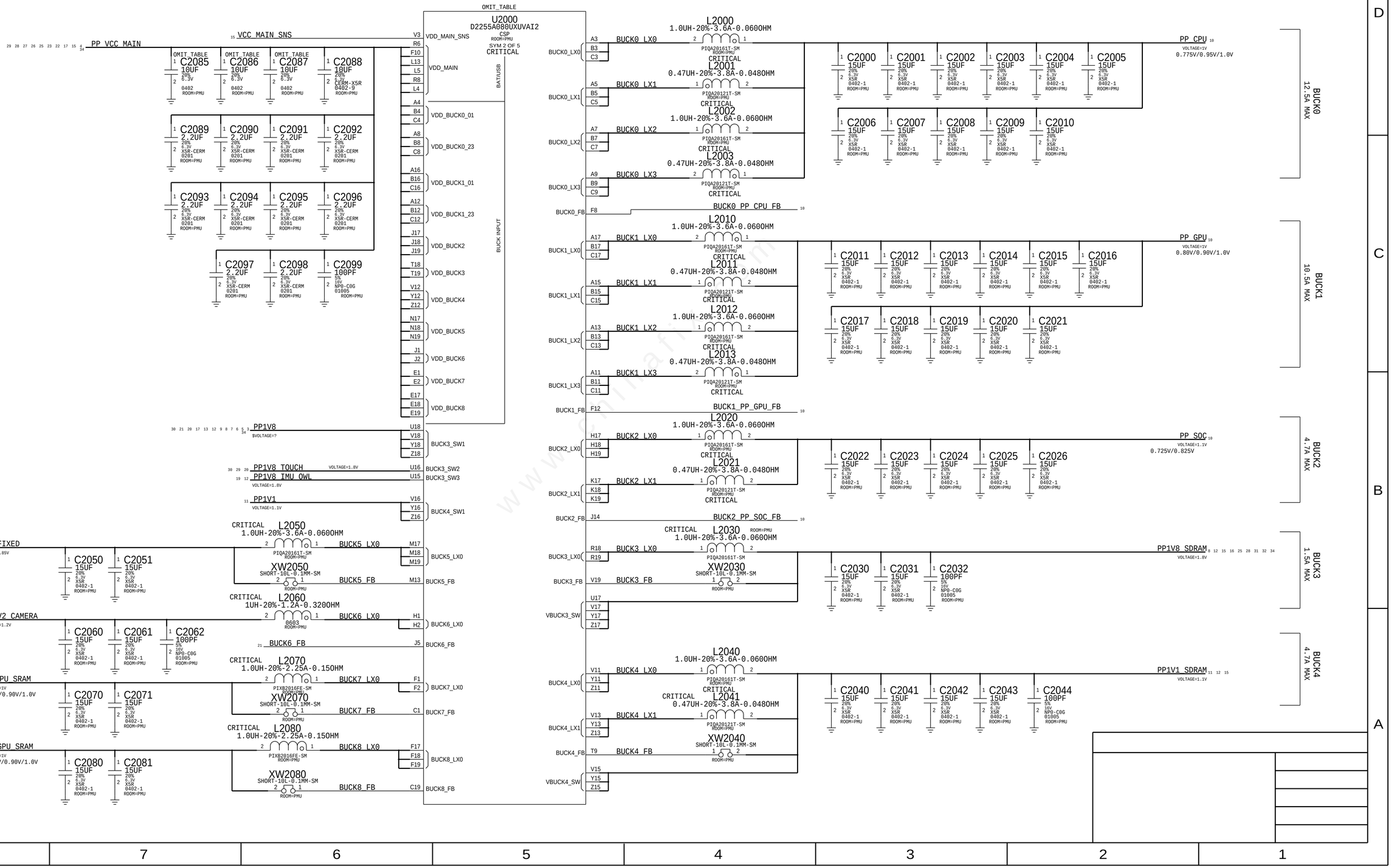
EXT_D0 G3 PMU_TO_NAND_LOW_BATT_BOOT_L
EXT_D1 J3 AP_TO_NAND_FW_STRAP
EXT_D2 H2 NC
EXT_D3 E3 NC
EXT_D4 E7 NC
EXT_D5 F6 NC
EXT_D6 C7 NC
EXT_D7 B8 SYSTEM_ALIVE
EXT_NCE G1 PCIE_AP_TO_NAND_RESET_L
EXT_NRE F4 SWD_AP_BI_NAND_SWDIO_R
EXT_NWE C5 SWD_AP_NAND_SWCLK_R
EXT_RNB G5 NC
EXT_CLE H4 NC
EXT_ALE D4

SWD_AP_BI_NAND_SWDIO_R → R1520 → SWD_AP_BI_NAND_SWDIO
SWD_AP_NAND_SWCLK_R → R1521 → SWD_AP_PERIPHERAL_SWCLK

PROBE POINTS

SWD_AP_BI_NAND_SWDIO_R → PP1520 P3MM-NSM ROOM=NAND
SWD_AP_NAND_SWCLK_R → PP1521 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_REFCLK_P → PP1500 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_REFCLK_N → PP1501 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_TXD0_P → PP1502 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_TXD0_N → PP1503 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_TXD1_P → PP1504 P3MM-NSM ROOM=NAND
PCIE_AP_TO_NAND_TXD1_N → PP1505 P3MM-NSM ROOM=NAND

ANTIGUA PMU - Buck Supplies



ANTIGUA PMU - LDOs

ANTIGUA LDO SPECS

LDO#	ADJ.RANGE	ACCURACY	MAX.CURRENT
LDO1 (A)	2.5-3.3V	+/-1.4%	50mA
LDO2 (B)	1.2-2.0V	+/-2.5%	50mA
LDO3 (A)	2.5-3.3V	+/-1.4%	50mA
LDO4 (D)	0.7-1.2V	+/-2.5%	100mA
LDO5 (F)	2.5-3.3V	+/-2.5%	1000mA
LDO6 (C1)	1.2-3.6V	+/-2.5%	150mA
LDO7 (C)	2.5-3.3V	+/-25mV	250mA
LDO8 (C)	2.5-3.3V	+/-25mV	250mA
LDO9 (C)	2.5-3.3V	+/-25mV	250mA
LDO10 (G)	0.7-1.2V	+/-5.5%	1335mA
LDO11 (C)	2.5-3.3V	+/-25mV	250mA
LDO12 (E)	1.8V	+/-5%	10mA
LDO13 (C)	2.5-3.3V	+/-25mV	250mA
LDO14 (H)	0.8-1.5V	+/-2.5%	250mA
LDO15 (B)	1.2-2.0V	+/-2.5%	50mA

PP_VCC_MAIN

C2120 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2121 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2122 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU

XW2105 SHORT-10L-0.1MM-SM ROOM=PMU PLACE_NEAR=U2000.V2:2MM

VCC_MAIN_SNS

C2123 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2124 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2125 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2126 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU
C2127 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=PMU

PP1V1_SDRAM

C2130 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2131 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU

PP1V8_SDRAM

C2132 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 1 OF 5
CRITICAL
ROOM=PMU

LDO INPUT

M3 VDD_LDO1_3
V2 VDD_LDO2
M2 VDD_LDO4
U1
U2 VDD_LDO5
L2 VDD_LDO6
Y6 VDD_LDO7
Y4 VDD_LDO8
Y3 VDD_LDO9
Y9
Z9 VDD_LDO10
R3 VDD_LDO11
Y5 VDD_LDO13
Y7 VDD_LDO14
N2 VDD_LDO15
K3 VDD_BYPASS

LDO

P12 VPP_OTP

VLDO1 M1 — VOLTAGE=3.3V — PP3V3_USB 5
VLDO2 V1 — VOLTAGE=1.8V — PP1V8_VA 25 26 27
VLDO3 L1 — VOLTAGE=3.0V — PP3V0_TRISTAR 19 28 31 32 34
VLDO4 N1 — VOLTAGE=0.8V — PP0V8_OWL 11
T1 — VOLTAGE=3.0V — PP3V0_NAND 13
VLDO5 T2
VLDO6 K1 — VOLTAGE=3.3V — PP3V3_ACC 31
VBYPASS K2
VLDO7 Z6 — VOLTAGE=3.0V — PP3V0_PROX_ALS 20
VLDO8 Z4 — VOLTAGE=2.75V — PMU_LDO8
VLDO9 Z3 — VOLTAGE=2.85V — PP2V85_CAM_AVDD_PMU 20 21
VLDO9_FB Y2 — CAM_AVDD_FB — PLACE_NEAR=U2000.Y2:2mm ROOM=PMU — XW2100 SHORT-10L-0.25MM-SM
Y8
VLDO10 Z8 — VOLTAGE=0.9V — PP0V9_NAND 13
VLDO11 R2 — VOLTAGE=3.0V — PP3V0_PROX_IRLED 20
VLDO12 K6 — VOLTAGE=1.8V — PP1V8_ALWAYS 8 12 17
VLDO13 Z5 — VOLTAGE=3.0V — PP3V0_MESA 29
VLDO14 Z7 — VOLTAGE=1.2V — PP1V2 5 6 7
VLDO15 P2 — VOLTAGE=1.8V — PP1V8_MESA 29
VPUMP U19 — PMU_VPUMP

VPUMP:10nF min. @ 4.6V

C2100 47NF 20% 6.3V X5R-CERM 01005 ROOM=PMU

C2101 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2102 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2103 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2104 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2105 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2106 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2107 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU
C2108 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2109 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2110 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2111 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU
C2112 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2113 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2114 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=PMU
C2115 4.3UF 20% 4V X5R-CERM 0610 ROOM=PMU

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 5 OF 5
CRITICAL
ROOM=PMU

D10 D11 D12 D13 D14 D15 D16 D17 D18 D2 D5 D6 D7 D8 D9 D3 E10 E11 E12 E13 D4 E15 E16 E3 E4 E5 E7 E8 E9 F14 F15 F16 F3 F4 G14 G15 G16 G3 G4 H15 H16 H3 H4 — NC

J15 J16 J3 J4 K15 K16 L15 L16 M14 M15 M16 M14 N15 N16 P13 P14 P15 P16 P17 R13 R14 R15 R16 R17 T10 T11 T12 T13 T14 T15 T17 U10 U11 U12 U13 U14 U4 U5 U6 V4 V5 V6 — NC

OMIT_TABLE
U2000
D2255A080UXUVAI2
CSP
SYM 4 OF 5
CRITICAL
ROOM=PMU

A1 A10 A14 A18 A19 A2 A6 B1 B10 B14 B18 B19 B2 B6 C10 C14 C18 C2 C6 D1 D19 E14 G1 G17 G18 G19 G2 H7 J6 K12 K7 L17 L18 L19 L6 L7 — VSS

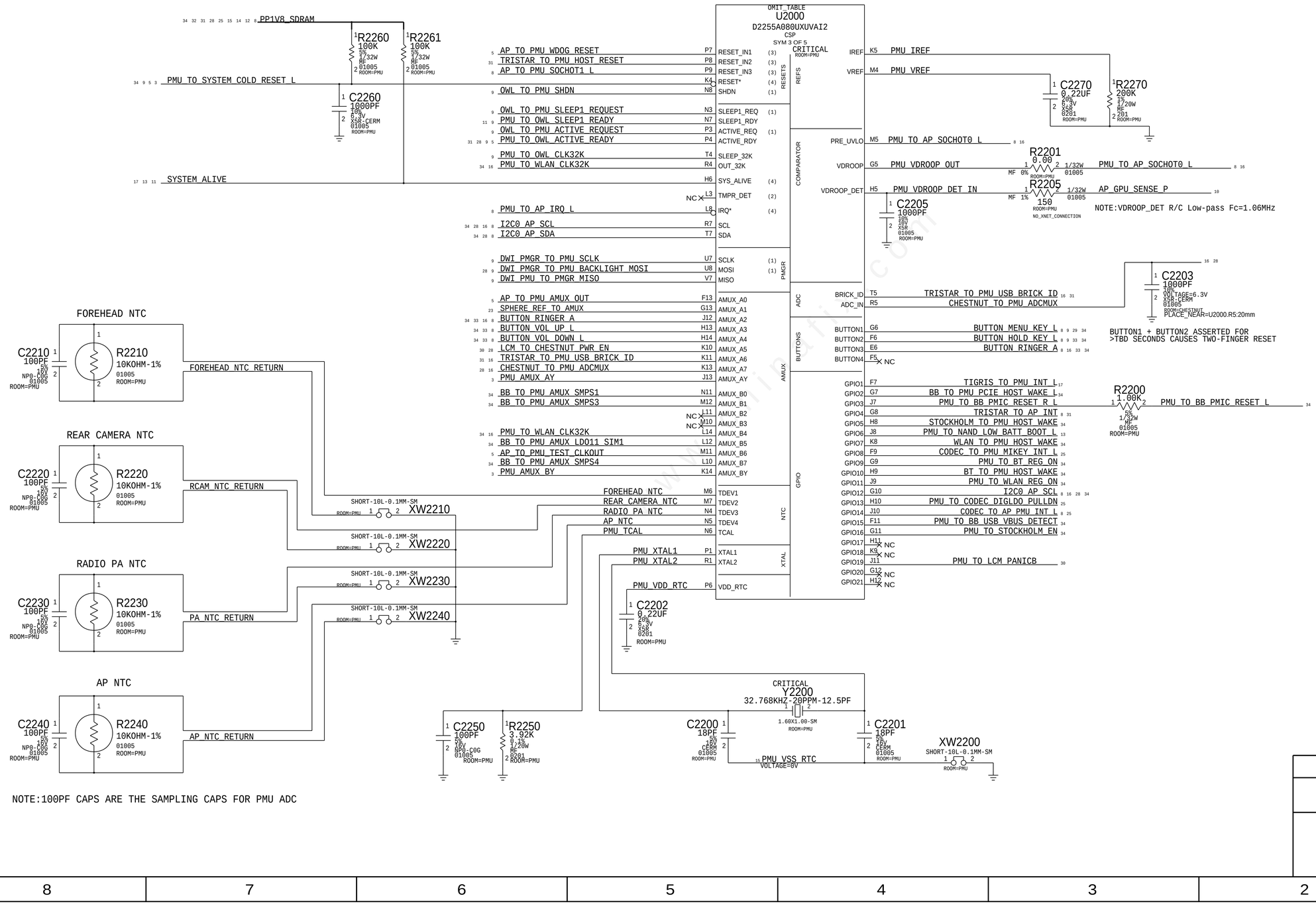
L9 M8 M9 N10 N12 N13 N9 P10 P11 P18 P19 P5 R10 R11 R12 R9 T16 T3 T6 T8 U3 U9 V10 V14 V8 V9 Y1 Y10 Y14 Y19 Z1 Z10 Z14 Z19 Z2 — XTAL GND

T3 — PMU_VSS_RTC 16

ANTIGUA PMU - GPIOs, NTCs

CONTROL PIN NOTES:

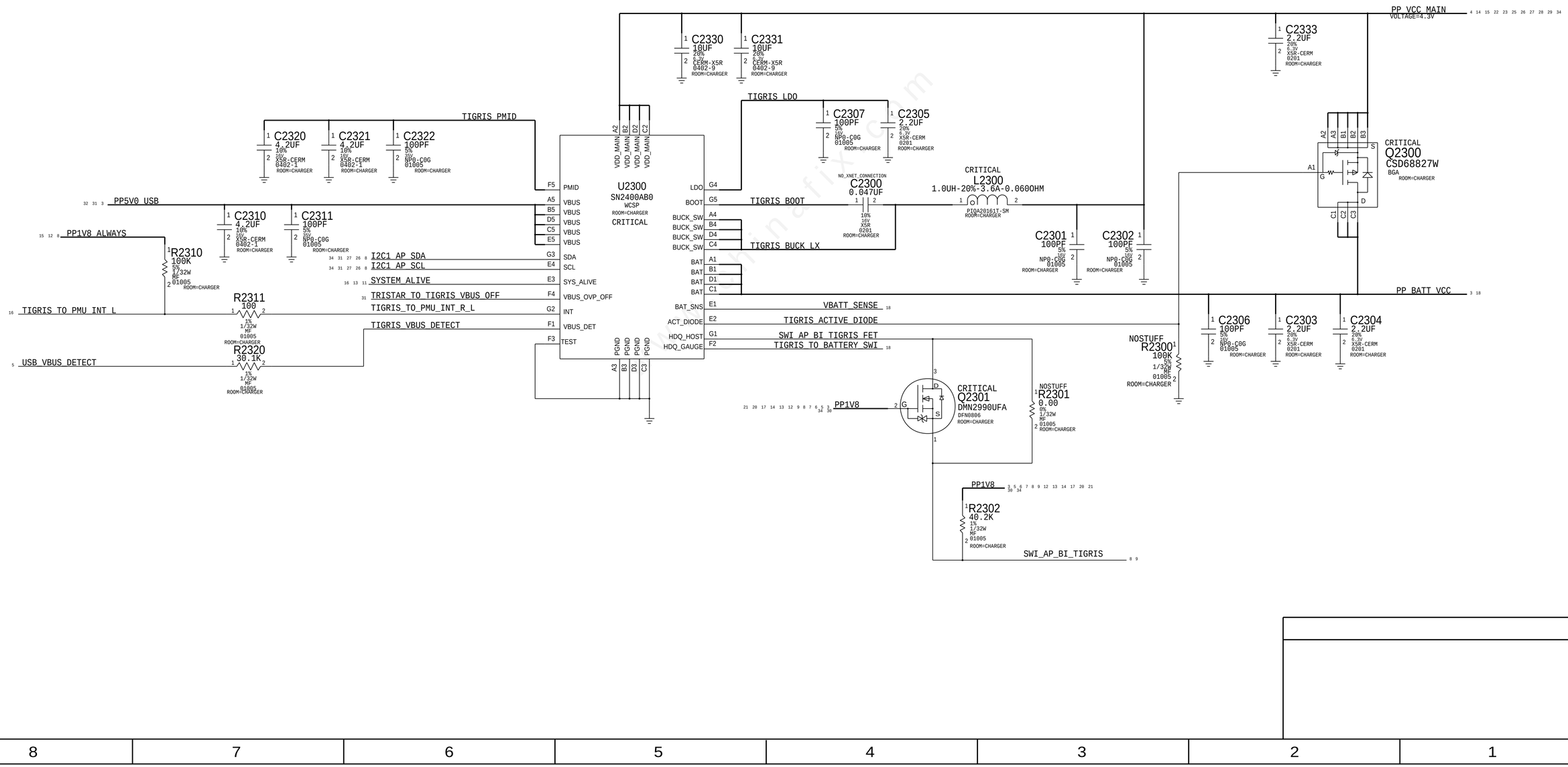
NOTE (1):INPUT PULL-DOWN 100-300k
NOTE (2):INPUT PULL-DOWN 1M
NOTE (3):INPUT PULL-UP OR DOWN 100k-300k
NOTE (4):OUTPUT OPEN-DRAIN, REQUIRES PULL-UP



NOTE:100PF CAPS ARE THE SAMPLING CAPS FOR PMU ADC

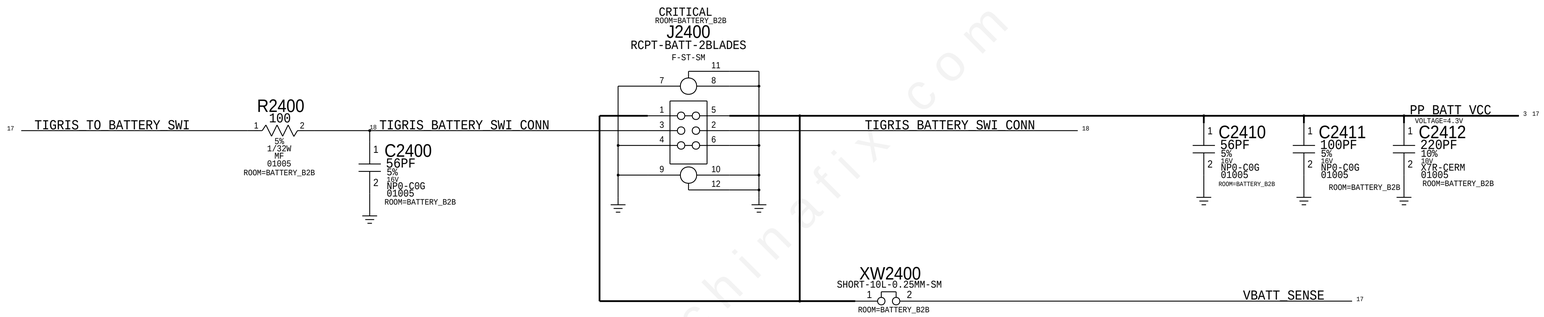
TIGRIS CHARGER

APN:343S0693



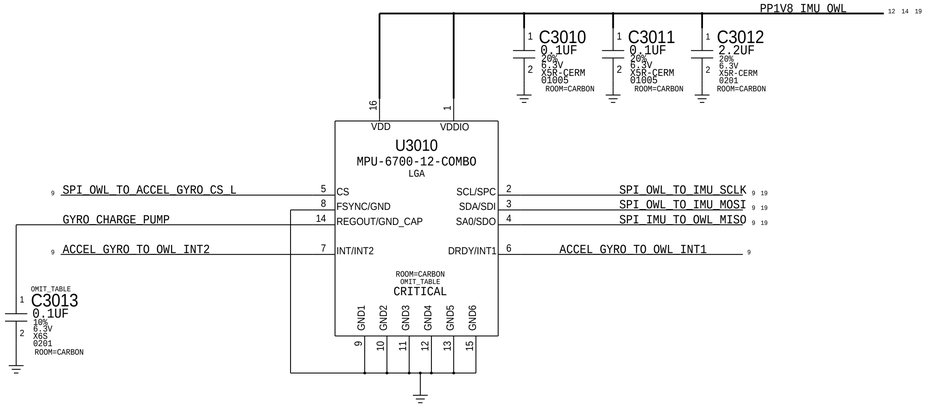
BATTERY CONNECTOR

THIS ONE ON MLB ---> 516S00104 (RCPT)
516????? (PLUG)



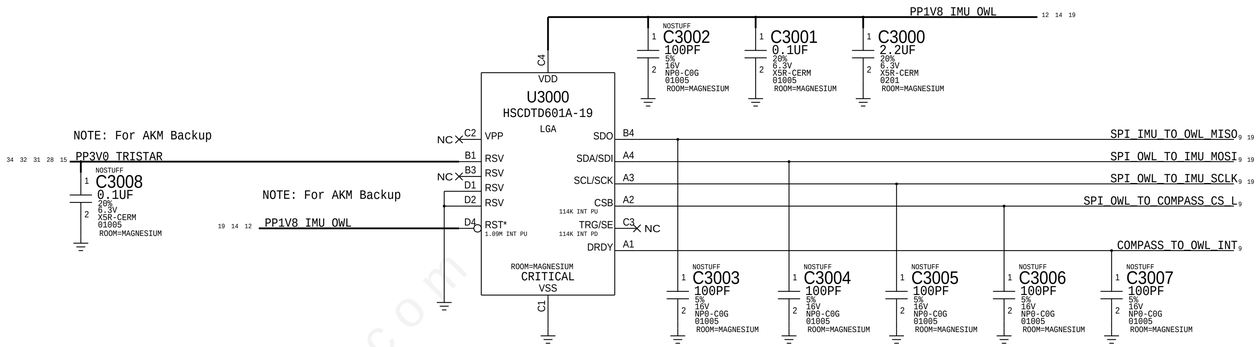
CARBON - ACCEL & GYRO

ST (APN 338S00029): C3013=0.01UF
INVENSENSE, MPU-6700 (APN 338S00017): C3013=0.1UF
DOE INVENSENSE, MPU-6800 (APN 338S00087): C3013=0.1UF



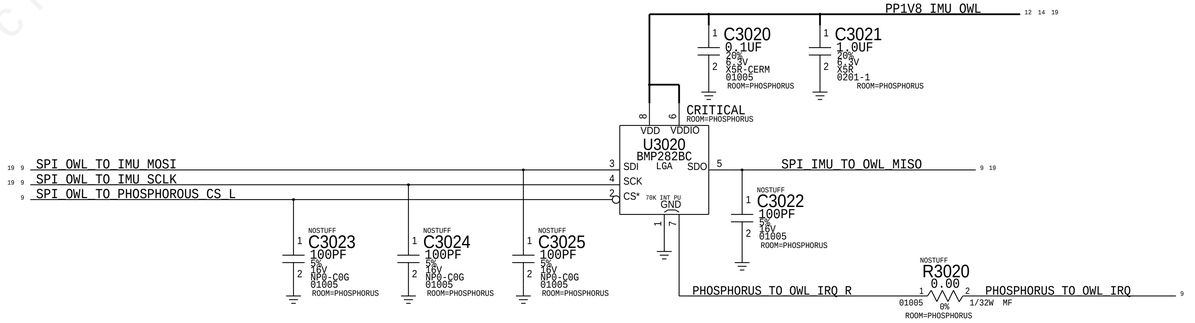
MAGNESIUM - COMPASS

APN:338S00084



PHOSPHOROUS

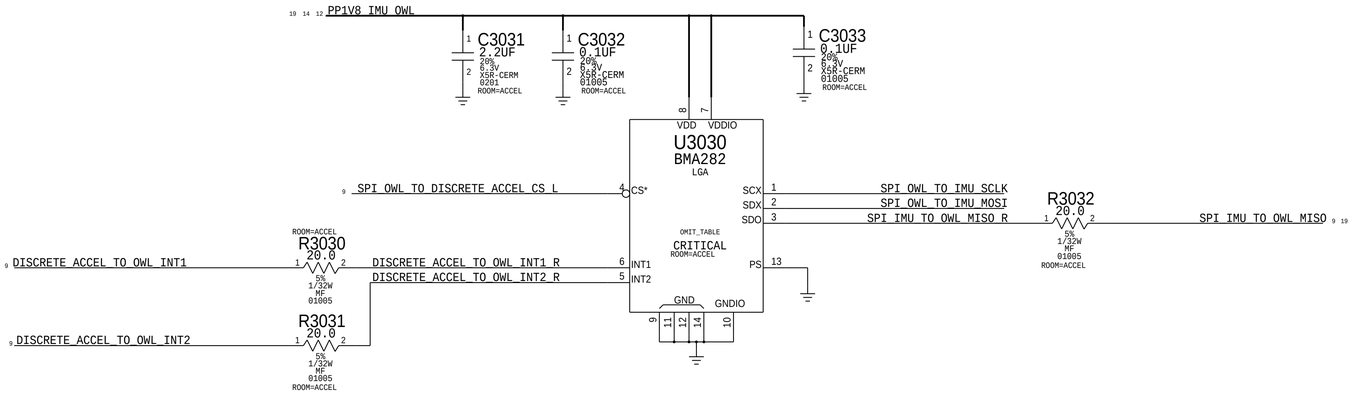
BOSCH (APN:338S00044)



R3020 SHOULD BE STUFFED FOR ST PHOSPHORUS ONLY.
FOR BOSCH PHOSPHORUS, PINS 1 AND 7 ARE SHORTED INTERNALLY,
SO NO NEED FOR 0-OHM TO GROUND OPTION ON PIN 7.

DISCRETE ACCEL

BOSCH APN 338S1163
NO-STUFF for Invensense DOE



FRONT CAMERA FLEX

CAMERA POWER

FL3100
FERR-22-OHM-1A-0.055OHM
PP1V8 → PP1V8_FCAM_CONN (VOLTAGE=1.8V)
C3101 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CG_B2B
C3100 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FL3102
FERR-22-OHM-1A-0.055OHM
PP1V2_CAMERA → PP1V2_FCAM_VCORE_CONN (VOLTAGE=1.2V)
C3103 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CG_B2B
C3102 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FL3104
FERR-22-OHM-1A-0.055OHM
PP2V85_CAM_AVDD_PMU → PP2V85_FCAM_AVDD_CONN (VOLTAGE=2.85V)
C3106 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3105 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CG_B2B
C3104 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

CAMERA I/O

FL3110
120-OHM-210MA
AP_TO_FCAM_CLK → AP_TO_FCAM_CLK_CONN
C3110 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FL3111
120-OHM-210MA
AP_TO_FCAM_SHUTDOWN_L → AP_TO_FCAM_SHUTDOWN_CONN_L
C3111 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

I2C_ISP_TO_FCAM_SCL
C3112 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

I2C_ISP_BI_FCAM_SDA
C3113 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

CAMERA MIPI

CRITICAL
L3100
65-OHM-0.1A-0.7-2GHZ
TAM0605 SYM_VER-2
MIPI_FCAM_TO_AP_DATA0_P → MIPI_FCAM_TO_AP_DATA0_CONN_P
MIPI_FCAM_TO_AP_DATA0_N → MIPI_FCAM_TO_AP_DATA0_CONN_N

CRITICAL
L3101
65-OHM-0.1A-0.7-2GHZ
TAM0605 SYM_VER-2
MIPI_FCAM_TO_AP_DATA1_P → MIPI_FCAM_TO_AP_DATA1_CONN_P
MIPI_FCAM_TO_AP_DATA1_N → MIPI_FCAM_TO_AP_DATA1_CONN_N

CRITICAL
L3102
65-OHM-0.1A-0.7-2GHZ
TAM0605 SYM_VER-2
MIPI_FCAM_TO_AP_CLK_P → MIPI_FCAM_TO_AP_CLK_CONN_P
MIPI_FCAM_TO_AP_CLK_N → MIPI_FCAM_TO_AP_CLK_CONN_N

PROX & ALS POWER

PP3V0_PROX_IRLED
C3120 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B
C3121 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CG_B2B
C3122 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3123 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3124 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B

FL3125
120-OHM-210MA
PP3V0_PROX_ALS → PP3V0_PROX_CONN (VOLTAGE=3.0V)
C3125 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FL3126
120-OHM-210MA
PP3V0_ALS_CONN (VOLTAGE=3.0V)
C3130 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3129 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3128 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=CG_B2B
C3127 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=CG_B2B
C3126 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

PROX & ALS INTERFACE

I2C_TOUCH_TO_MAMBA_PROX_SCL
R3142 0.00 0% 1/32W MF 01005 DOPPLER_PROX ROOM=CG_B2B
C3140 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B DOPPLER_PROX
PGND_IRLED_K
TOUCH_TO_PROX_TX_EN_BUFF
R3140 1.00M 5% 1/32W MF 01005 ROOM=CG_B2B
CRITICAL
Q3140
DMN3730UFB4
DFN1006H4-3
SYM_VER-1
ANALOG_PROX
ROOM=CG_B2B

PP1V8_TOUCH
R3141 100K 5% 1/32W MF 01005 ROOM=CG_B2B
TOUCH_TO_PROX_RX_EN_FCAM_CONN

I2C_TOUCH_BI_MAMBA_PROX_SDA
R3144 0.00 0% 1/32W MF 01005 DOPPLER_PROX ROOM=CG_B2B
PROX_TO_TOUCH_RX_LCM_CONN
R3143 0.00 0% 1/32W MF 01005 ANALOG_PROX ROOM=CG_B2B
PROX_TO_TOUCH_RX_FCAM_CONN
C3143 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B DOPPLER_PROX

I2C2_AP_SDA (MAKE_BASE=TRUE) → I2C2_AP_BI_ALS_SDA_CONN
C3144 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

I2C2_AP_SCL (MAKE_BASE=TRUE) → I2C2_AP_TO_ALS_SCL_CONN
C3145 56PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FL3146
120-OHM-210MA
ALS_TO_AP_INT_L → ALS_TO_AP_INT_CONN_L
C3146 100PF 5% 16V NP0-C0G 01005 ROOM=CG_B2B

FCAM CONNECTOR

MLB: 516S1081 (RCPT)
FLEX: 516S1177 (PLUG)

CRITICAL
J3100
AA22L
F-ST-SM
41 ROOM=CG_B2B

CODEC_TO_RCVR_CONN_N	1	2	CODEC_TO_HAC_CONN_P
CODEC_TO_RCVR_CONN_P	3	4	CODEC_TO_HAC_CONN_N
AP_TO_FCAM_CLK_CONN	5	6	PP1V2_FCAM_VCORE_CONN
PP1V8_FCAM_CONN	7	8	
PP2V85_FCAM_AVDD_CONN	9	10	MIPI_FCAM_TO_AP_DATA0_CONN_N
	11	12	MIPI_FCAM_TO_AP_DATA0_CONN_P
	13	14	MIPI_FCAM_TO_AP_CLK_CONN_P
AP_TO_FCAM_SHUTDOWN_CONN_L	15	16	MIPI_FCAM_TO_AP_CLK_CONN_N
I2C_ISP_TO_FCAM_SCL	17	18	MIPI_FCAM_TO_AP_DATA1_CONN_P
I2C_ISP_BI_FCAM_SDA	19	20	MIPI_FCAM_TO_AP_DATA1_CONN_N
	21	22	
PP3V0_PROX_CONN	23	24	
TOUCH_TO_PROX_RX_EN_FCAM_CONN	25	26	PROX_TO_TOUCH_RX_FCAM_CONN
PGND_IRLED_K	27	28	PP3V0_PROX_IRLED
	29	30	PP3V0_ALS_CONN
I2C2_AP_BI_ALS_SDA_CONN	31	32	ALS_TO_AP_INT_CONN_L
I2C2_AP_TO_ALS_SCL_CONN	33	34	PP_CODEC_TO_FRONTMIC3_BIAS_CONN
FRONTMIC3_TO_CODEC_AIN4_CONN_N	35	36	FRONTMIC3_TO_CODEC_AIN4_CONN_P

37 38 39 40 42

FL3150
120-OHM-210MA
PP_CODEC_TO_FRONTMIC3_BIAS → PP_CODEC_TO_FRONTMIC3_BIAS_CONN (VOLTAGE=2.86V)
DZ3150 6.8V-100PF 01005 ROOM=CG_B2B

FL3151
70-OHM-25%-0.28A
CODEC_TO_HAC_N → CODEC_TO_HAC_CONN_N
DZ3151 12V-33PF 01005-1 NO_XNET_CONNECTION=1 ROOM=CG_B2B

FL3152
70-OHM-25%-0.28A
CODEC_TO_HAC_P → CODEC_TO_HAC_CONN_P
DZ3152 12V-33PF 01005-1 NO_XNET_CONNECTION=1 ROOM=CG_B2B

FL3153
70-OHM-25%-0.28A
CODEC_TO_RCVR_N → CODEC_TO_RCVR_CONN_N
DZ3153 12V-33PF 01005-1 NO_XNET_CONNECTION=1 ROOM=CG_B2B

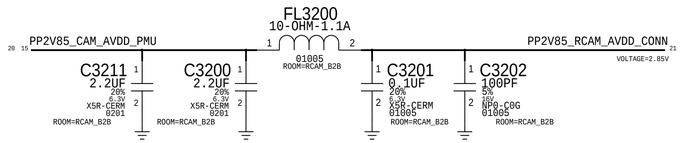
FL3154
70-OHM-25%-0.28A
CODEC_TO_RCVR_P → CODEC_TO_RCVR_CONN_P
DZ3154 12V-33PF 01005-1 NO_XNET_CONNECTION=1 ROOM=CG_B2B

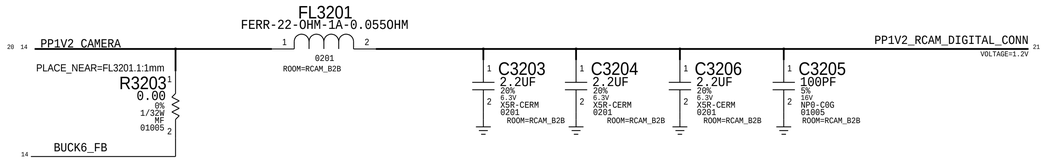
FL3155
120-OHM-210MA
FRONTMIC3_TO_CODEC_AIN4_N → FRONTMIC3_TO_CODEC_AIN4_CONN_N
DZ3155 6.8V-100PF 01005 NO_XNET_CONNECTION=1 ROOM=CG_B2B

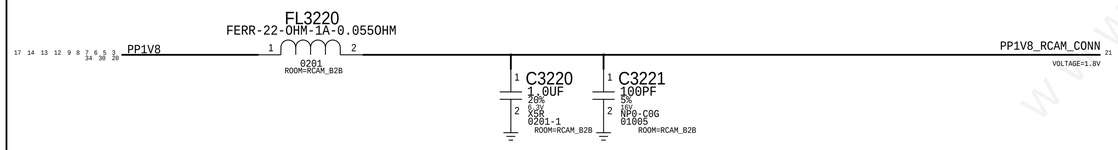
FL3156
120-OHM-210MA
FRONTMIC3_TO_CODEC_AIN4_P → FRONTMIC3_TO_CODEC_AIN4_CONN_P
DZ3156 6.8V-100PF 01005 NO_XNET_CONNECTION=1 ROOM=CG_B2B

REAR CAMERA FLEX

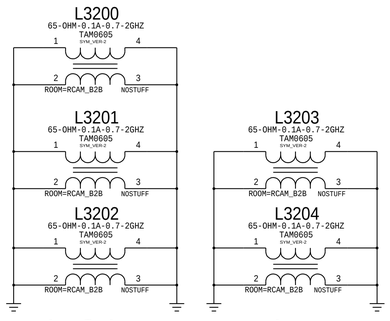
CAMERA POWER/MAMBA LDO







MIPI Common-Mode Chokes

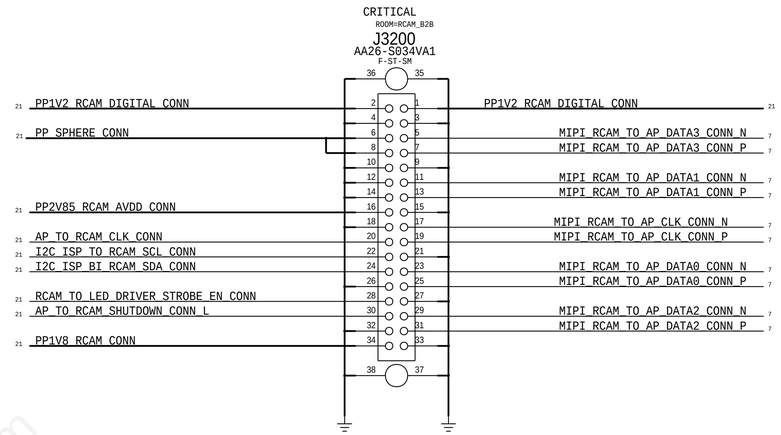


Placeholder Footprints

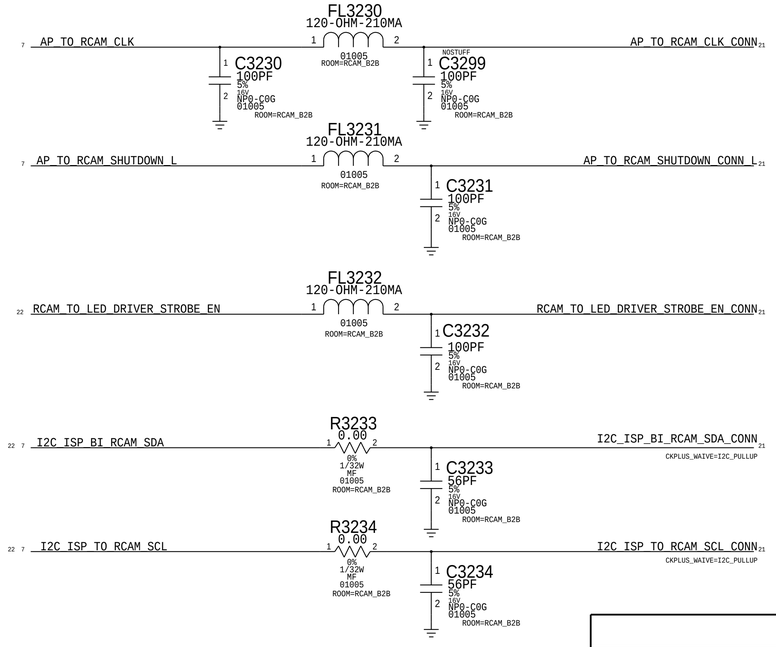
RCAM CONNECTOR

MLB: 516S00043 (RCPT)

FLEX: 516S00042 (PLUG)



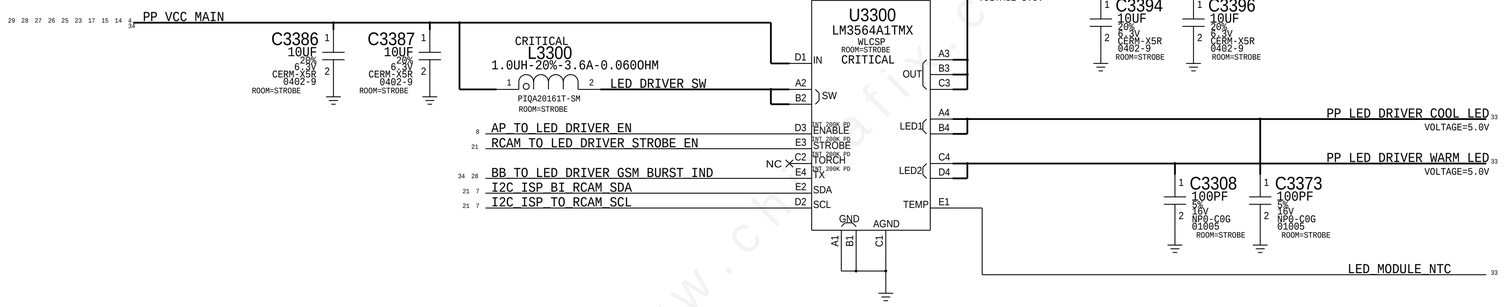
Digital I/O



D

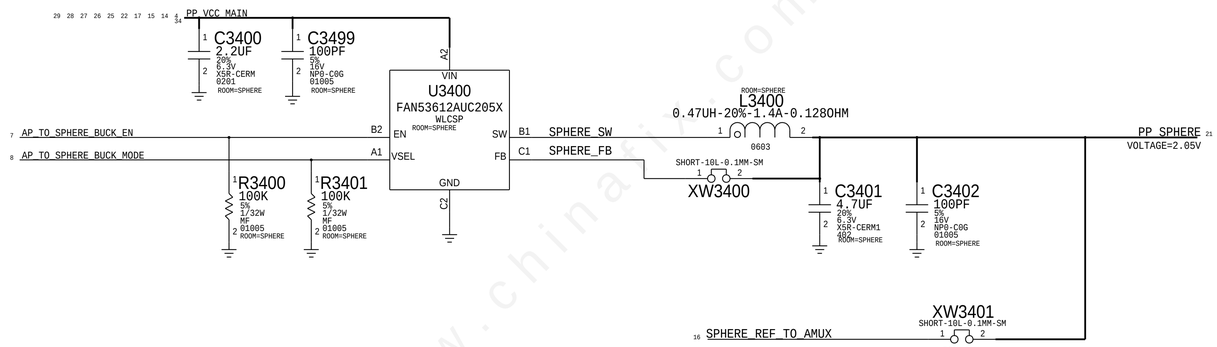
DUAL LED STROBE DRIVER

APN:353S3899



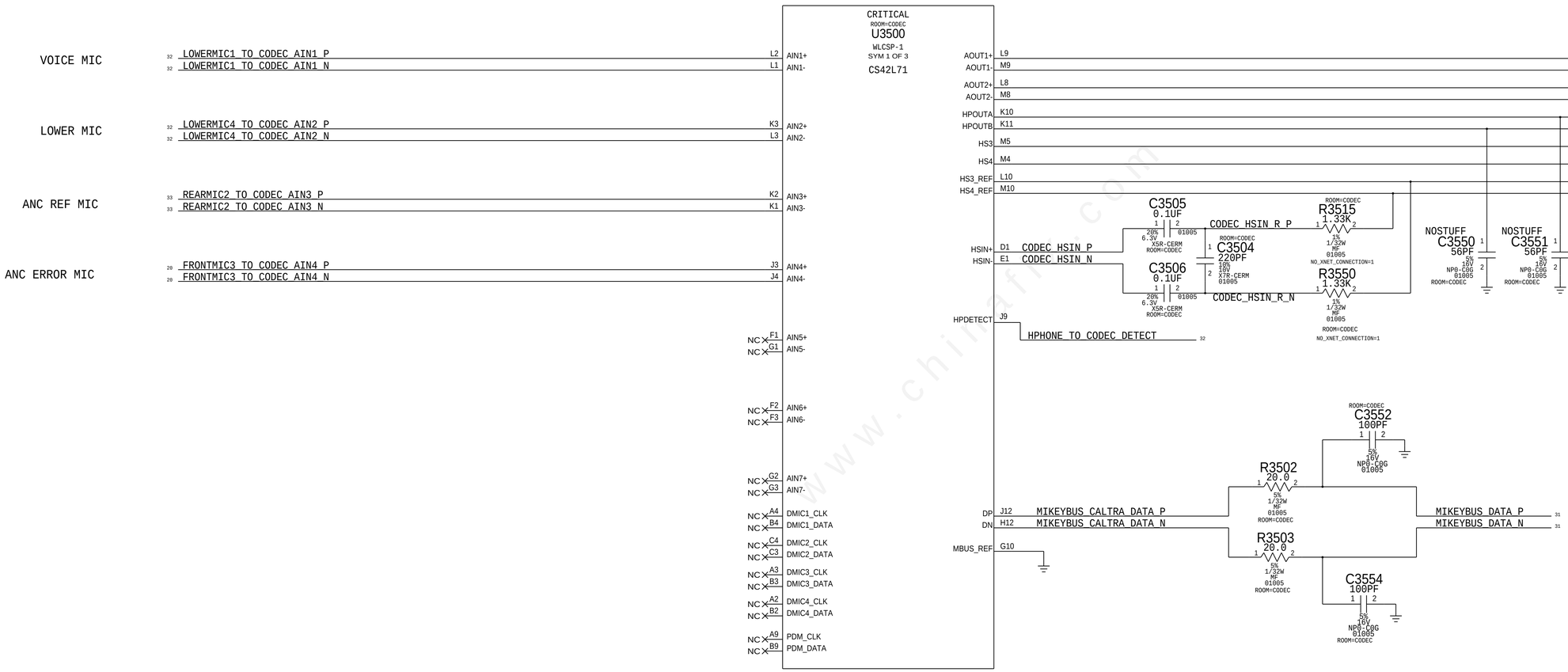
Sphere Driver

APN:353S00413

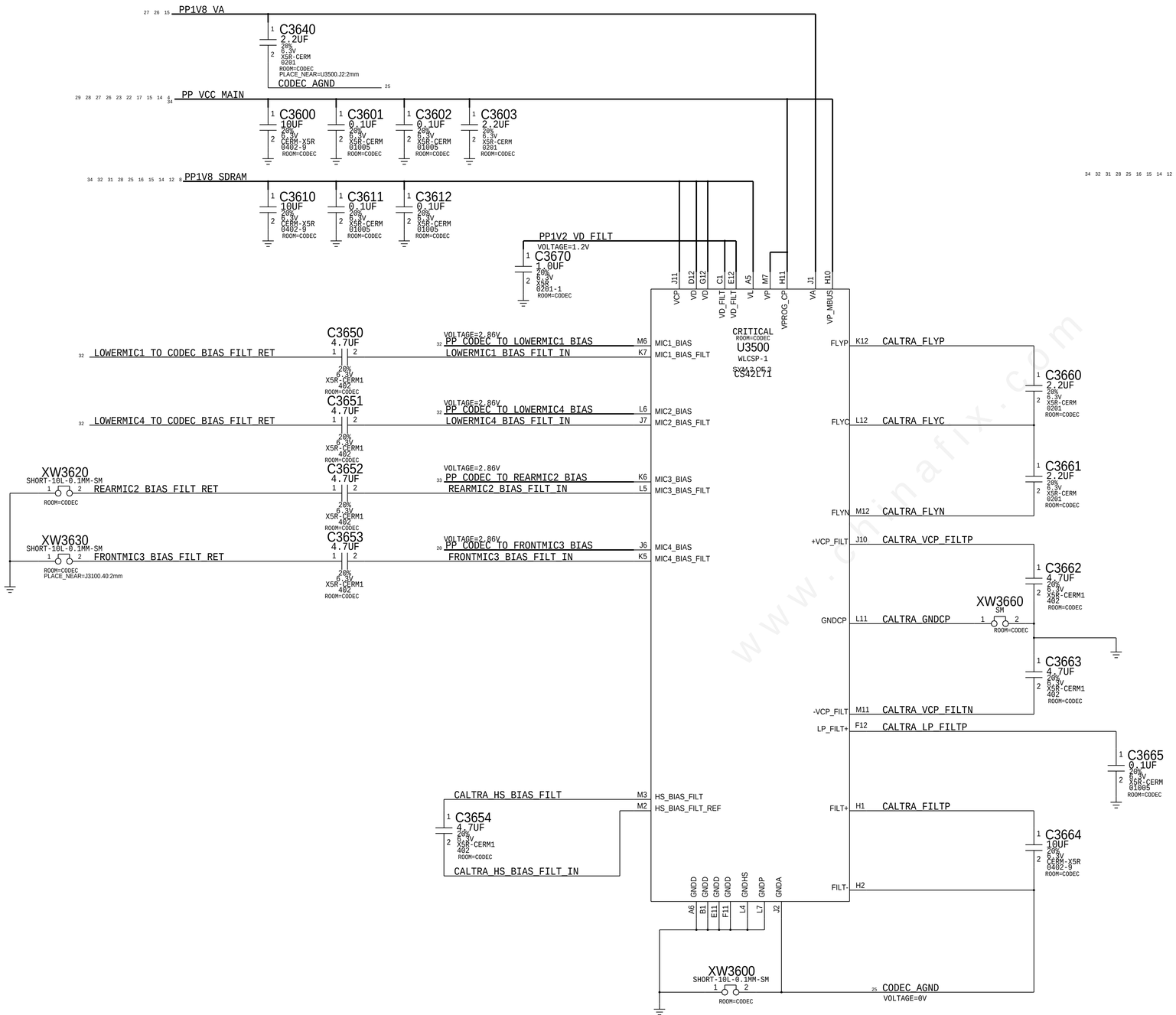


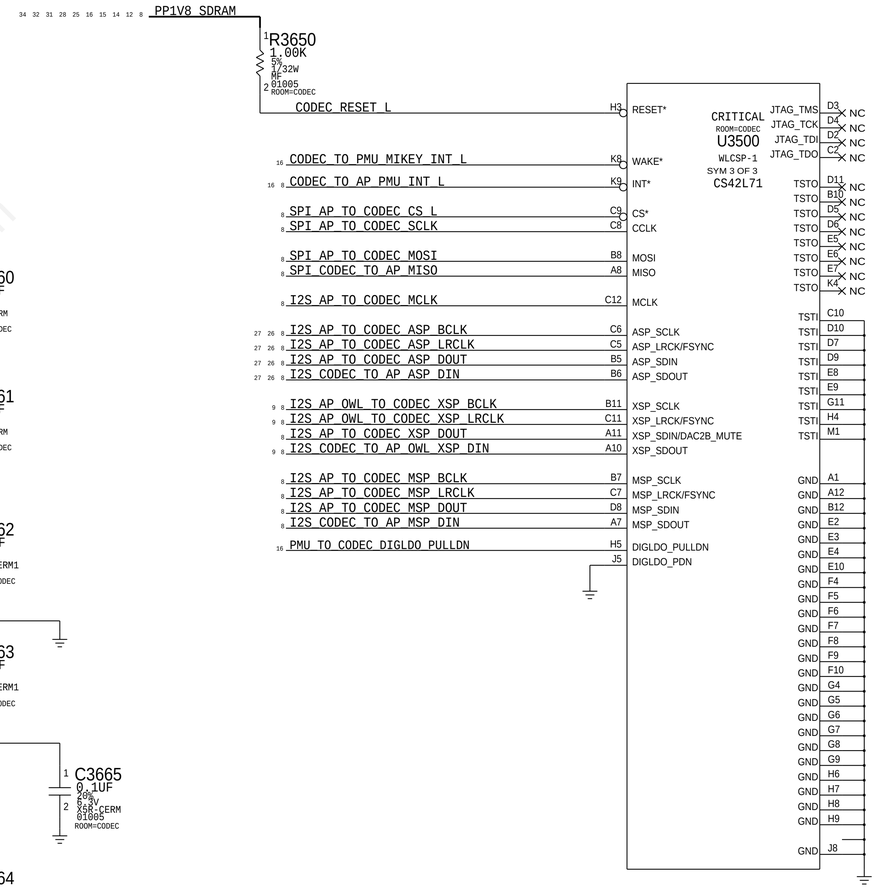
CALTRA AUDIO CODEC (ANALOG INPUTS & OUTPUTS)

APN:338S00105



CALTRA AUDIO CODEC (POWER & I/O)





SPEAKER AMPLIFIER

APN: 338S1285
I2C ADDRESS: 1000000

PP VCC MAIN
PP1V8 VA
C3795 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SPKR_AMP
C3732 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=SPKR_AMP
C3735 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SPKR_AMP
C3737 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SPKR_AMP
C3709 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SPKR_AMP
C3730 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SPKR_AMP
C3741 10UF 20% 10V X5R-CERM 0402-8 ROOM=SPKR_AMP
C3742 10UF 20% 10V X5R-CERM 0402-8 ROOM=SPKR_AMP
C3743 10UF 20% 10V X5R-CERM 0402-8 ROOM=SPKR_AMP
C3744 10UF 20% 10V X5R-CERM 0402-8 ROOM=SPKR_AMP
C3745 0.1UF 10% 16V X5R-CERM 0201 ROOM=SPKR_AMP
C3746 100PF 5% 10V NP0-C0G 01005 ROOM=SPKR_AMP
VOLTAGE=8.0V
PP_SPKR_VBOOST
CRITICAL
L3700
1.2UH-20%-3.0A-0.080OHM
PIQA20161T-SM
ROOM=SPKR_AMP
SPEAKERAMP_SW
U3700
CS35L21-XWZR
WLCSP
VER1
ROOM=SPKR_AMP
CRITICAL
A1 B1 C1 D1 A4 A5 F5
VBST VP VA
A2 B2 SW
D5 SDA
D6 SCL
A7 INT*
A6 RESET*
D7 ALIVE
C7 ADO 1M INT PD
E7 MCLK 1M INT PD
E6 SCLK 1M INT PD
F6 LRCK/FSYNC 1M INT PD
F7 SDIN 1M INT PD
E5 SDOUT 1M INT PD
GNDP
GNDA
A3 B3 B4 C3 C4 D3 D4 B5 B6 C6 E4 F3 F4
I2C1_AP_SDA
I2C1_AP_SCL
SPEAKERAMP_TO_AP_INT_L
AP_TO_SPEAKERAMP_RESET_L
AP_TO_SPEAKERAMP_STAYIN_ALIVE
I2S_AP_TO_SPEAKERAMP_MCLK
I2S_AP_TO_CODEC_ASP_BCLK
I2S_AP_TO_CODEC_ASP_LRCLK
I2S_AP_TO_CODEC_ASP_DOUT
I2S_CODEC_TO_AP_ASP_DIN
R3729 100K 5% 1/32W MF 01005 ROOM=SPKR_AMP
R3735 44.2K 1% 1/32W MF 01005 ROOM=SPKR_AMP
FILT+ F2 SPEAKERAMP_FILT
LDO_FILT C5 SPEAKERAMP_LDO_FILT
C3729 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=SPKR_AMP
C3740 4.7UF 20% 6.3V CER-X5R 0402 ROOM=SPKR_AMP
VSENSE- E3 SPEAKER_TO_SPEAKERAMP_VSENSE_N
VSENSE+ E2 SPEAKER_TO_SPEAKERAMP_VSENSE_P
ISENSE- F1 SPEAKERAMP_ISENSE_N
ISENSE+ E1 SPEAKERAMP_ISENSE_P
OUT+ D2 SPEAKERAMP_OUT_POS
OUT- C2
IREF+ B7 SPEAKERAMP_IREF
C3701 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=SPKR_AMP
C3704 220PF 5% 10V C0G-CERM 01005 ROOM=SPKR_AMP
R3702 39.2 1% 1/32W MF 01005 ROOM=SPKR_AMP
SPEAKERAMP_ISENSE_R_P
R3701 39.2 1% 1/32W MF 01005 ROOM=SPKR_AMP
SPEAKERAMP_ISENSE_R_N
C3705 220PF 5% 10V C0G-CERM 01005 ROOM=SPKR_AMP
XW3702 SHORT-10L-0.1MM-SM ROOM=SPKR_AMP PLACE_NEAR=R3703.1:0.5mm
XW3701 SHORT-10L-0.1MM-SM ROOM=SPKR_AMP PLACE_NEAR=R3703.2:0.5mm
R3703 0.100 1% 1/4W MF 0402 ROOM=SPKR_AMP
SPEAKERAMP_TO_SPEAKER_OUT_POS
SPEAKERAMP_TO_SPEAKER_OUT_NEG
C3760 1000PF 10% 10V X5R 01005 ROOM=SPKR_AMP
C3763 1000PF 10% 10V X5R 01005 ROOM=SPKR_AMP
C3700 1000PF 10% 10V X5R 01005 ROOM=SPKR_AMP
C3702 1000PF 10% 10V X5R 01005 ROOM=SPKR_AMP

ARC DRIVER

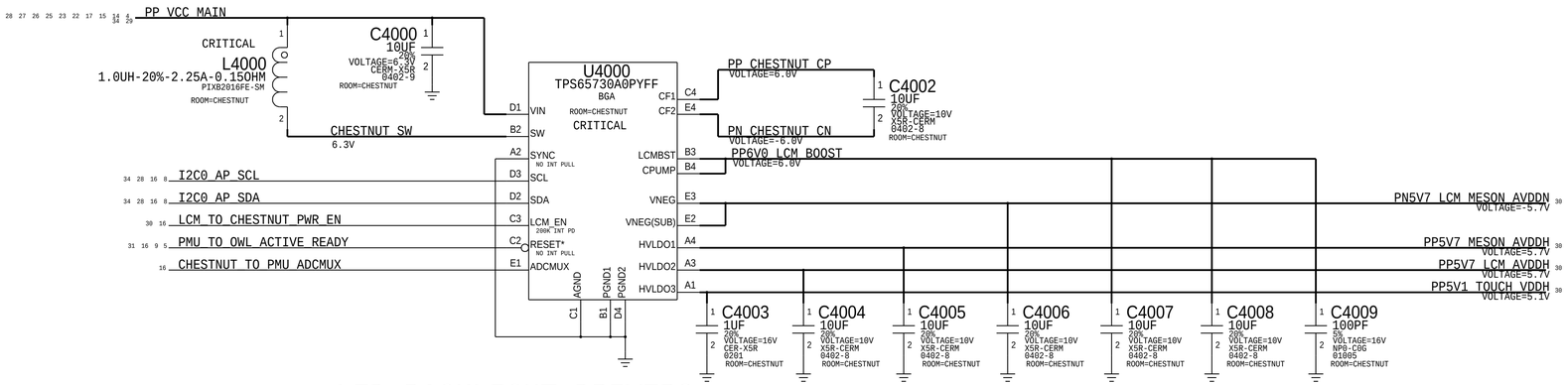
APN: 338S1285
I2C ADDRESS: 1000001

PP VCC MAIN
PP1V8 VA
PP ARC VBOOST
VOLTAGE=8.0V
C3895 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=ARC
C3832 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=ARC
C3835 10UF 20% 6.3V CERM-X5R 0402-9 ROOM=ARC
C3837 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=ARC
C3809 0.1UF 20% 6.3V X6S-CERM 01005 ROOM=ARC
C3830 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=ARC
C3803 10UF 20% 10V X5R-CERM 0402-8 ROOM=ARC
C3848 22UF 20% 10V X5R-CERM 0603-1 ROOM=ARC
C3842 0.1UF 10% 16V X6S-CERM 0201 ROOM=ARC
C3846 100PF 5% 16V NP0-C0G 01005 ROOM=ARC
CRITICAL
L3800 1.2UH-20%-3.0A-0.080OHM PIQA2016T-SM ROOM=ARC
ARC SW
U3800 CS35L21-XWZR WLCSP VER1 ROOM=ARC CRITICAL
VBST
VP
VA
C3829 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=ARC
C3840 4.7UF 20% 6.3V X5R-CERM1 402 ROOM=ARC
FILT+ ARC_DRIVER_FILT
LDO_FILT ARC_DRIVER_LDO_FILT
I2C1_AP_SDA
I2C1_AP_SCL
ARC_TO_AP_INT_L
AP_TO_ARC_RESET_L
AP_TO_ARC_STAYIN_ALIVE
PP1V8_VA
I2S_AP_TO_ARC_MCLK
I2S_AP_TO_CODEC_ASP_BCLK
I2S_AP_TO_CODEC_ASP_LRCLK
I2S_AP_TO_CODEC_ASP_DOUT
I2S_CODEC_TO_AP_ASP_DIN
SDA
SCL
INT*
RESET*
ALIVE
ADO 1M INT PD
MCLK 1M INT PD
SCLK 1M INT PD
LRCK/FSYNC 1M INT PD
SDIN 1M INT PD
SDOUT 1M INT PD
R3829 100K 5% 1/32W 01005 ROOM=ARC
GNDP
GNDA
VSENSE- SOLENOID_TO_ARC_DRIVER_VSENSE_R_N
VSENSE+ SOLENOID_TO_ARC_DRIVER_VSENSE_R_P
ISENSE- ARC_ISENSE_N
ISENSE+ ARC_ISENSE_P
OUT+ ARC_DRIVER_OUT_POS
OUT-
IREF+ ARC_IREF
R3835 44.2K 1% 1/32W MF 01005 ROOM=ARC
R3811 0.00 0% 1/32W MF 01005 ROOM=ARC
R3810 0.00 0% 1/32W MF 01005 ROOM=ARC
SOLENOID_TO_ARC_DRIVER_VSENSE_N
SOLENOID_TO_ARC_DRIVER_VSENSE_P
NOSTUFF C3810 220PF 10% 10V X7R-CERM 01005 ROOM=ARC
NOSTUFF C3811 220PF 10% 10V X7R-CERM 01005 ROOM=ARC
NOSTUFF C3804 220PF 20% 10V C0G-CERM 01005 ROOM=ARC
C3801 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=ARC
NOSTUFF C3805 220PF 20% 10V C0G-CERM 01005 ROOM=ARC
R3802 39.2 1% 1/32W MF 01005 ROOM=ARC
R3801 39.2 1% 1/32W MF 01005 ROOM=ARC
ARC_ISENSE_R_P
ARC_ISENSE_R_N
XW3802 SHORT-10L-0.1MM-SM ROOM=ARC
XW3801 SHORT-10L-0.1MM-SM ROOM=ARC
PLACE_NEAR=R3803.1:0.5mm
PLACE_NEAR=R3803.2:0.5mm
R3803 0.100 1% 1/4W MF 0402 ROOM=ARC
ARC_DRIVER_OUT_FILT_POS
ARC_DRIVER_OUT_FILT_NEG
XW3810 SHORT-10L-0.1MM-SM ROOM=ARC
NOSTUFF FL3803 120OHM-25%-1.8A-0.06DCR 0402 ROOM=ARC
FL3804 120OHM-25%-1.8A-0.06DCR 0402 NOSTUFF ROOM=ARC
XW3811 SHORT-10L-0.1MM-SM ROOM=ARC
ARC DRIVER TO SOLENOID OUT POS
ARC DRIVER TO SOLENOID OUT NEG
C3860 1000PF 10% 100V X5R 01005 ROOM=ARC
C3863 1000PF 10% 100V X5R 01005 ROOM=ARC
C3800 1000PF 10% 100V X5R 01005 ROOM=ARC
C3802 1000PF 10% 100V X5R 01005 ROOM=ARC

DISPLAY & TOUCH - POWER SUPPLIES

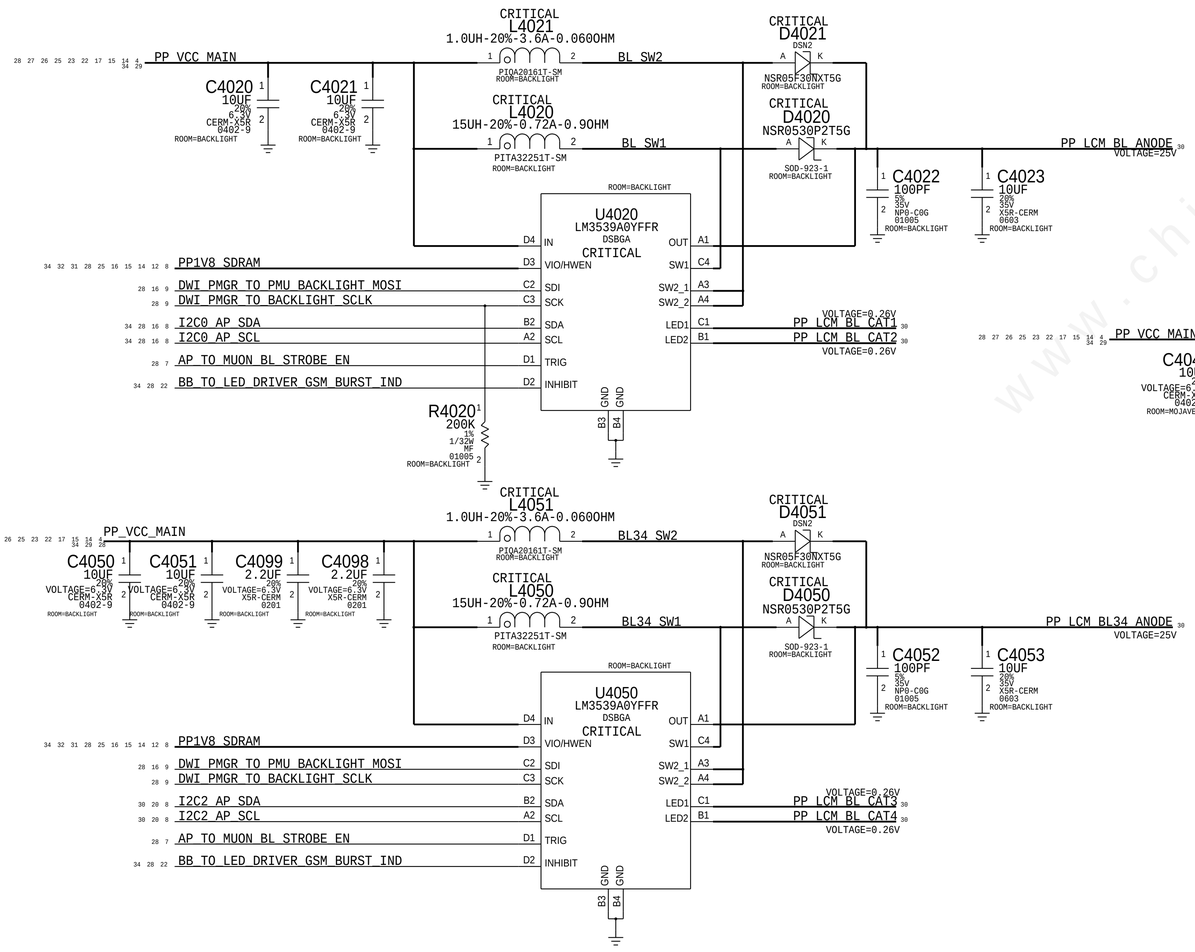
CHESTNUT DISPLAY PMU

APN:338S1172



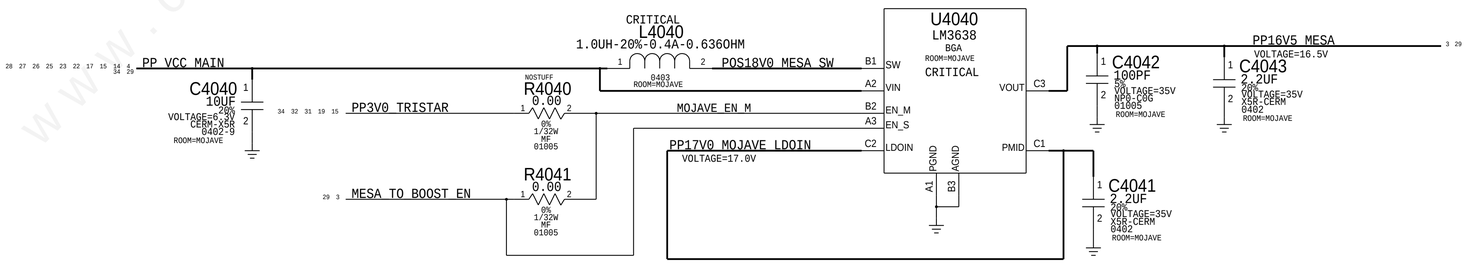
LED BACKLIGHT DRIVERS

APN:353S00407



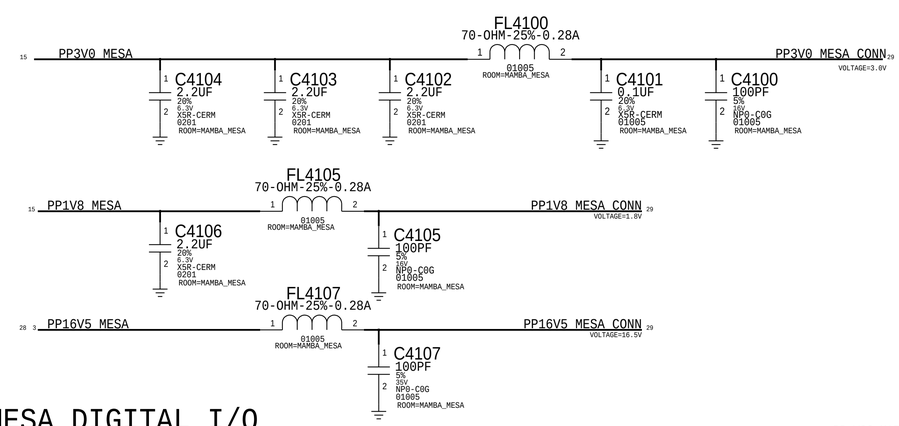
MOJAVE MESA BOOST

APN:353S3978

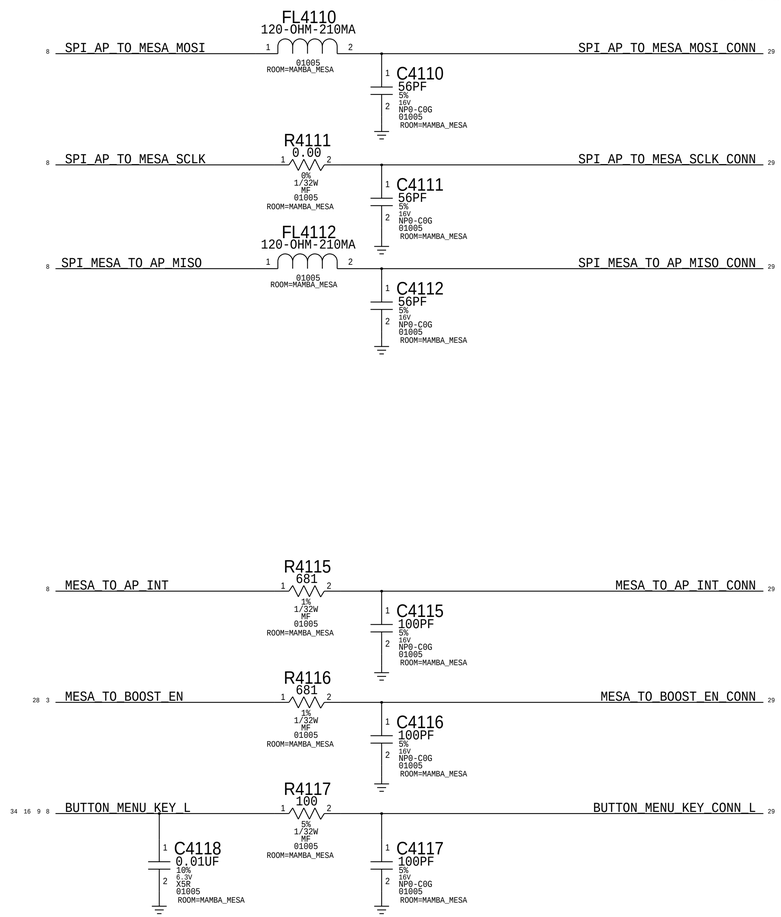


MAMBA & MESA FLEX

MESA POWER

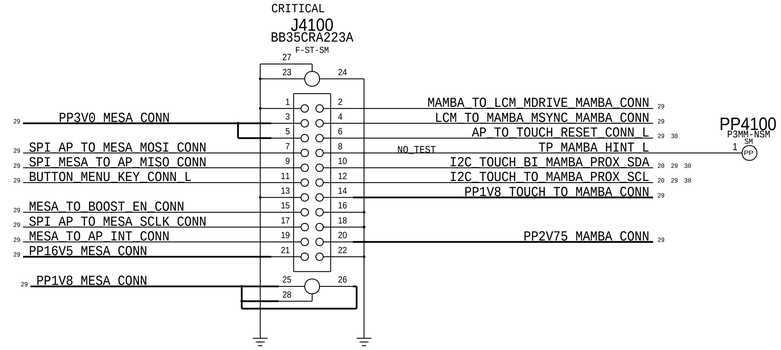


MESA DIGITAL I/O

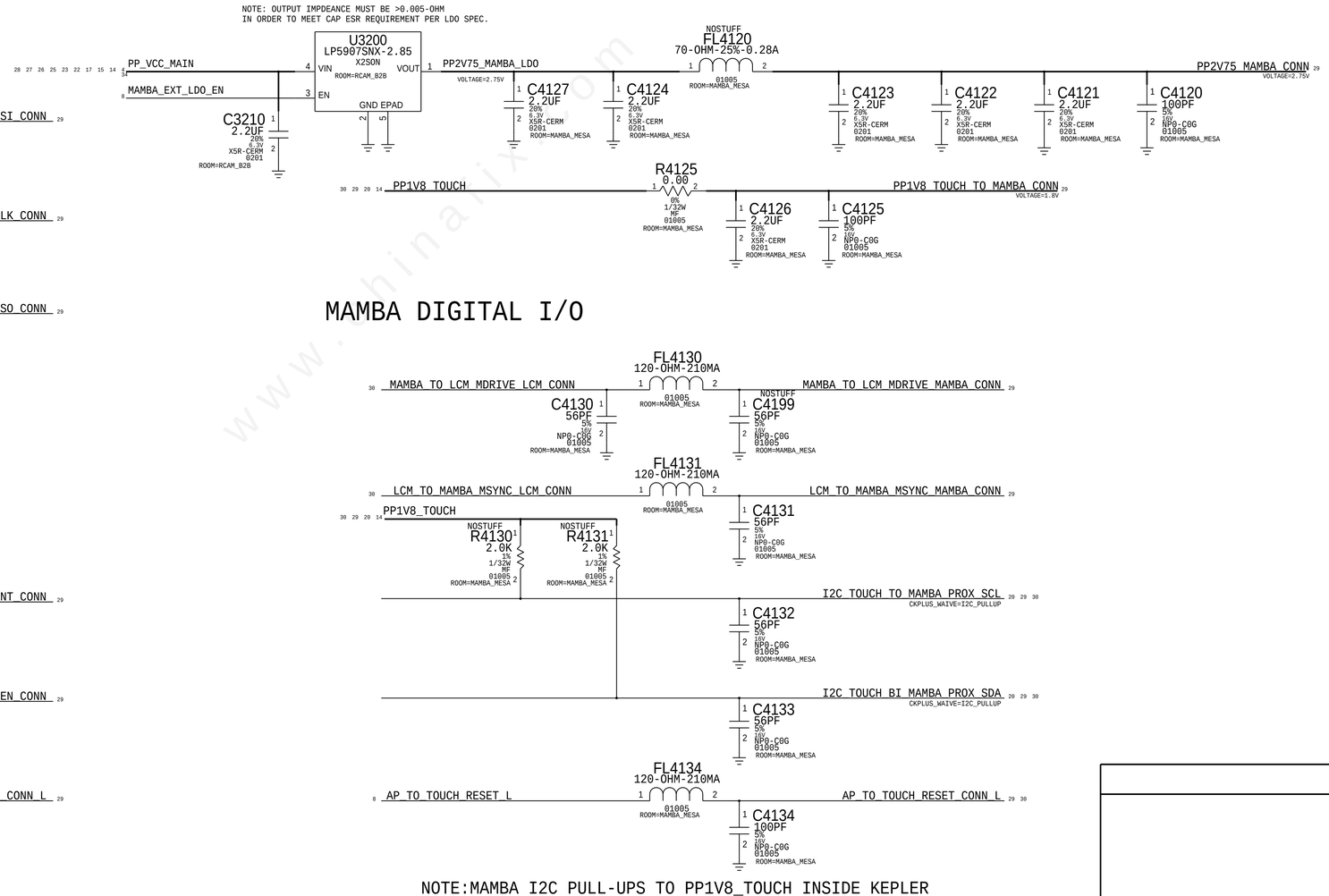


ORB & MESA CONNECTOR

MLB: 516S00056 (RCPT)



MAMBA POWER



MAMBA DIGITAL I/O

NOTE:MAMBA I2C PULL-UPS TO PP1V8_TOUCH INSIDE KEPLER
ADDING R4130, R4131 AS OPTION FOR TWEAKING VALUE

DISPLAY POWER

PP5V7_LCM_AVDDH → FL4200 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP5V7_LCM_AVDDH_CONN (VOLTAGE=5.7V)
- C4200 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4201 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4202 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4203 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4204 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP1V8 → FL4205 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP1V8_LCM_CONN (VOLTAGE=1.8V)
- C4205 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4206 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PN5V7_LCM_MESON_AVDDN → FL4207 70-OHM-25%-0.28A 01005 ROOM=KEPLER_B2B → PN5V7_LCM_MESON_AVDDN_CONN (VOLTAGE=-5.7V)
- C4207 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP5V7_MESON_AVDDH → FL4208 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP5V7_MESON_AVDDH_CONN (VOLTAGE=5.7V)
- C4208 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP1V8_TOUCH → FL4209 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP1V8_TOUCH_CONN (VOLTAGE=1.8V)
- C4215 2.2UF 20% 6.3V X5R-CERM 0201 ROOM=KEPLER_B2B
- C4209 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PP5V1_TOUCH_VDDH → FL4210 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP5V1_TOUCH_VDDH_CONN (VOLTAGE=5.1V)
- C4210 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

BACKLIGHT

PP_LCM_BL_ANODE → FL4211 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_ANODE_CONN (VOLTAGE=25V)
- C4211 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT1 → FL4212 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT1_CONN (VOLTAGE=0.26V)
- C4212 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT2 → FL4213 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT2_CONN (VOLTAGE=0.26V)
- C4213 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL34_ANODE → FL4291 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL34_ANODE_CONN (VOLTAGE=25V)
- C4291 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT3 → FL4292 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT3_CONN (VOLTAGE=0.26V)
- C4292 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

PP_LCM_BL_CAT4 → FL4293 2400OHM-350MA 0201 ROOM=KEPLER_B2B → PP_LCM_BL_CAT4_CONN (VOLTAGE=0.26V)
- C4293 100PF 5% 35V NP0-C0G 01005 ROOM=KEPLER_B2B

DISPLAY EEPROM I2C

I2C2_AP_SDA
- C4223 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B NOSTUFF

I2C2_AP_SCL
- C4224 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B NOSTUFF

DISPLAY MIPI

	L4200 CRITICAL 65-OHM-0.1A-0.7-2GHZ TAM0605 SYM_VER-2 ROOM=KEPLER_B2B	
MIPI_AP_TO_LCM_CLK_P		MIPI_AP_TO_LCM_CLK_CONN_P
MIPI_AP_TO_LCM_CLK_N		MIPI_AP_TO_LCM_CLK_CONN_N
	L4201 CRITICAL	
MIPI_AP_TO_LCM_DATA0_P		MIPI_AP_TO_LCM_DATA0_CONN_P
MIPI_AP_TO_LCM_DATA0_N		MIPI_AP_TO_LCM_DATA0_CONN_N
	L4202 CRITICAL	
MIPI_AP_TO_LCM_DATA1_P		MIPI_AP_TO_LCM_DATA1_CONN_P
MIPI_AP_TO_LCM_DATA1_N		MIPI_AP_TO_LCM_DATA1_CONN_N
	L4293 CRITICAL	
MIPI_AP_TO_LCM_DATA2_P		MIPI_AP_TO_LCM_DATA2_CONN_P
MIPI_AP_TO_LCM_DATA2_N		MIPI_AP_TO_LCM_DATA2_CONN_N
	L4294 CRITICAL	
MIPI_AP_TO_LCM_DATA3_P		MIPI_AP_TO_LCM_DATA3_CONN_P
MIPI_AP_TO_LCM_DATA3_N		MIPI_AP_TO_LCM_DATA3_CONN_N

DISPLAY CONTROL SIGNALS

LCM_TO_CHESTNUT_PWR_EN → FL4220 120-OHM-210MA 01005 ROOM=KEPLER_B2B → LCM_TO_CHESTNUT_PWR_EN_CONN
- C4220 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

AP_TO_LCM_RESET_L → FL4221 120-OHM-210MA 01005 ROOM=KEPLER_B2B → AP_TO_LCM_RESET_CONN_L
- R4220 100K 5% 1/32W MF 01005 ROOM=KEPLER_B2B
- C4221 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PMU_TO_LCM_PANICB → R4222 10 5% 1/32W MF 01005 ROOM=KEPLER_B2B → PMU_TO_LCM_PANICB_CONN
- C4222 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

OWL/TOUCH INTERFACE

LCM_TO_OWL_BSYNC → FL4230 120-OHM-210MA 01005 ROOM=KEPLER_B2B → LCM_TO_OWL_BSYNC_CONN
- C4230 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

UART_OWL_TO_TOUCH_TXD → FL4231 120-OHM-210MA 01005 ROOM=KEPLER_B2B → UART_OWL_TO_TOUCH_TXD_CONN
- C4231 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

TOUCH_TO_OWL_ACCEL_DATA_REQUEST → FL4232 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_OWL_ACCEL_DATA_REQUEST_CONN
- C4232 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

PROX/TOUCH INTERFACE

PP1V8_TOUCH
- R4240 100K 5% 1/32W MF 01005 ROOM=KEPLER_B2B
- C4240 0.22UF 20% 6.3V X5R 01005-1 ROOM=KEPLER_B2B

U4240 CRITICAL ROOM=KEPLER_B2B 74AUP1G04GX SOT1226
TOUCH_TO_PROX_TX_EN_CONN_L → TOUCH_TO_PROX_TX_EN_BUFF
NC

TOUCH_TO_PROX_RX_EN_FCAM_CONN → FL4241 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_PROX_RX_EN_LCM_CONN
- C4241 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

KEPLER CONNECTOR

MLB: 516S00051 (RCPT)
FLEX: 516S00050 (PLUG)

CRITICAL J4200 AA27-S054VA1 F-ST-SM ROOM=DISPLAY

PP_LCM_BL_CAT3_CONN	1	2	PP_LCM_BL_CAT2_CONN
PP_LCM_BL_CAT4_CONN	3	4	PP_LCM_BL_CAT1_CONN
PP_LCM_BL34_ANODE_CONN	5	6	PP_LCM_BL_ANODE_CONN
	7	8	NC_KEPLER_MESON_TEST2_MUX_CONN
MIPI_AP_TO_LCM_DATA3_CONN_N	9	10	NC_KEPLER_MESON_TEST0_MUX_CONN
MIPI_AP_TO_LCM_DATA3_CONN_P	11	12	SPI_AP_TO_TOUCH_CS_CONN_L
	13	14	I2C2_AP_SDA
MIPI_AP_TO_LCM_DATA2_CONN_N	15	16	
MIPI_AP_TO_LCM_DATA2_CONN_P	17	18	TOUCH_TO_OWL_ACCEL_DATA_REQUEST_CONN
	19	20	I2C_TOUCH_BI_MAMBA_PROX_SDA
MIPI_AP_TO_LCM_CLK_CONN_N	21	22	SPI_AP_TO_TOUCH_SCLK_CONN
MIPI_AP_TO_LCM_CLK_CONN_P	23	24	TOUCH_TO_PROX_RX_EN_LCM_CONN
	25	26	AP_TO_TOUCH_RESET_CONN_L
MIPI_AP_TO_LCM_DATA1_CONN_N	27	28	TOUCH_TO_PROX_TX_EN_CONN_L
MIPI_AP_TO_LCM_DATA1_CONN_P	29	30	PROX_TO_TOUCH_RX_LCM_CONN
	31	32	SPI_TOUCH_TO_AP_MISO_CONN
MIPI_AP_TO_LCM_DATA0_CONN_N	33	34	SPI_AP_TO_TOUCH_MOSI_CONN
MIPI_AP_TO_LCM_DATA0_CONN_P	35	36	LCM_TO_OWL_BSYNC_CONN
	37	38	I2C2_AP_SCL
MAMBA_TO_LCM_MDRIVE_LCM_CONN	39	40	I2C_TOUCH_TO_MAMBA_PROX_SCL
LCM_TO_MAMBA_MSYNC_LCM_CONN	41	42	UART_OWL_TO_TOUCH_TXD_CONN
PP5V1_TOUCH_VDDH_CONN	43	44	NC_KEPLER_PHOTON_PIFA_CONN
PP5V7_MESON_AVDDH_CONN	45	46	PMU_TO_LCM_PANICB_CONN
PP1V8_LCM_CONN	47	48	AP_TO_LCM_RESET_CONN_L
PP5V7_LCM_AVDDH_CONN	49	50	LCM_TO_CHESTNUT_PWR_EN_CONN
PN5V7_LCM_MESON_AVDDN_CONN	51	52	TOUCH_TO_AP_INT_L_CONN
PP1V8_TOUCH_CONN	53	54	AP_TO_TOUCH_CLK32K_RESET_CONN_L
	57	58	

AP/TOUCH INTERFACE

SPI_AP_TO_TOUCH_CS_L → FL4250 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_CS_CONN_L
- C4250 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_AP_TO_TOUCH_SCLK → FL4251 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_SCLK_CONN
- C4251 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B NOSTUFF
- C4299 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_AP_TO_TOUCH_MOSI → FL4252 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_AP_TO_TOUCH_MOSI_CONN
- C4252 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

SPI_TOUCH_TO_AP_MISO → FL4253 120-OHM-210MA 01005 ROOM=KEPLER_B2B → SPI_TOUCH_TO_AP_MISO_CONN
- C4253 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

TOUCH_TO_AP_INT_L → FL4254 120-OHM-210MA 01005 ROOM=KEPLER_B2B → TOUCH_TO_AP_INT_L_CONN
- C4254 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

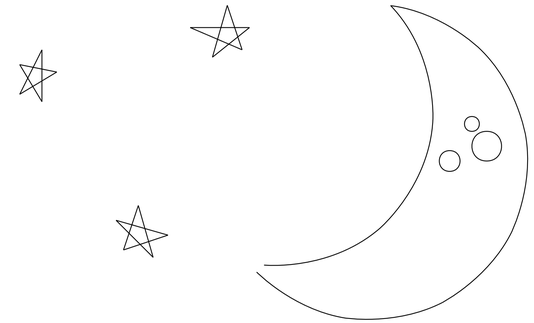
AP_TO_TOUCH_CLK32K_RESET_L → FL4255 120-OHM-210MA 01005 ROOM=KEPLER_B2B → AP_TO_TOUCH_CLK32K_RESET_CONN_L
- C4255 100PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B

I2C_TOUCH_BI_MAMBA_PROX_SDA
- C4260 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B NOSTUFF

I2C_TOUCH_TO_MAMBA_PROX_SCL
- C4261 56PF 5% 16V NP0-C0G 01005 ROOM=KEPLER_B2B NOSTUFF

TRISTAR 2

APN:343S0695



PP3V0_TRISTAR

C4500 1.0UF 20% 6.3V X5R 0201-1 ROOM=TRISTAR

C4501 0.1UF 20% 6.3V X5R-CERM 01005 ROOM=TRISTAR

PP1V8_SDRAM

C4502 0.01UF 10% 6.3V X5R 01005 ROOM=TRISTAR

PP3V3_ACC

PP5V0_USB

REVERSE_GATE

R4500 10K 5% 1/32W MF 01005 ROOM=TRISTAR

CRITICAL Q4500 CSD68822F4 0402 ROOM=TRISTAR

C4503 1UF 20% 10V CER-X5R 0201 ROOM=TRISTAR

TRISTAR_TO_PMU_USB_BRICK_ID

PLACE_NEAR=U2000.T5:20mm

R4510 6.34K 1% 1/32W MF 01005 ROOM=PMU

C4510 0.01UF 10% 6.3V X5R 01005 ROOM=PMU

PLACE_NEAR=U2000.T5:20mm

L4521 15NH-250MA 0201 ROOM=TRISTAR

L4522 15NH-250MA 0201 ROOM=TRISTAR

USB_AP_DATA_P

USB_AP_DATA_N

U4500 CBTL1610A3UK WLCSP

CRITICAL ROOM=TRISTAR

MIKEYBUS_DATA_P	C3	DIG_DP	
MIKEYBUS_DATA_N	C4	DIG_DN	
USB_BB_DATA_P	A1	USB1_DP	
USB_BB_DATA_N	B1	USB1_DN	
TRISTAR_USB_BRICK_ID_R	C2	BRICK_ID	
USB_AP_DATA_L_P	A3	USB0_DP	
USB_AP_DATA_L_N	B3	USB0_DN	
UART_AP_TO_ACCESSORY_TXD	E2	UART0_TX	
UART_ACCESSORY_TO_AP_RXD	E1	UART0_RX	
UART_AP_DEBUG_TXD	F2	UART1_TX	
UART_AP_DEBUG_RXD	F1	UART1_RX	
	D2	UART2_TX	
NC	D1	UART2_RX	
SWD_DOCK_TO_AP_SWCLK	A5	JTAG_CLK	
SWD_DOCK_BI_AP_SWDIO	B5	JTAG_DIO	
	F3	VDD_1V8	
	F4	VDD_3V0	
	D5	ACC_PWR	
	F5	DVSS	
	C1	DVSS	
	A6	DVSS	
P_IN	F6	VOLTAGE=5.0V	PP_TRISTAR_PIN
ACC1	C5	VOLTAGE=4.3V	PP_TRISTAR_ACC1
ACC2	E5	VOLTAGE=4.3V	PP_TRISTAR_ACC2
DP1	A2		TRISTAR_DP1_CONN_P
DN1	B2		TRISTAR_DP1_CONN_N
DP2	A4		TRISTAR_DP2_CONN_P
DN2	B4		TRISTAR_DP2_CONN_N
CON_DET_L	E3		TRISTAR_CON_DETECT_L
POW_GATE_EN*	D6		TRISTAR_TO_TIGRIS_VBUS_OFF
SWITCH_EN	E4		PMU_TO_OWL_ACTIVE_READY
HOST_RESET	B6		TRISTAR_TO_PMU_HOST_RESET
SDA	D3		I2C1_AP_SDA
SCL	D4		I2C1_AP_SCL
INT	C6		TRISTAR_TO_AP_INT
BYPASS	E6		TRISTAR_BYPASS

C4504 1.0UF 20% 6.3V X5R 0201-1 ROOM=TRISTAR

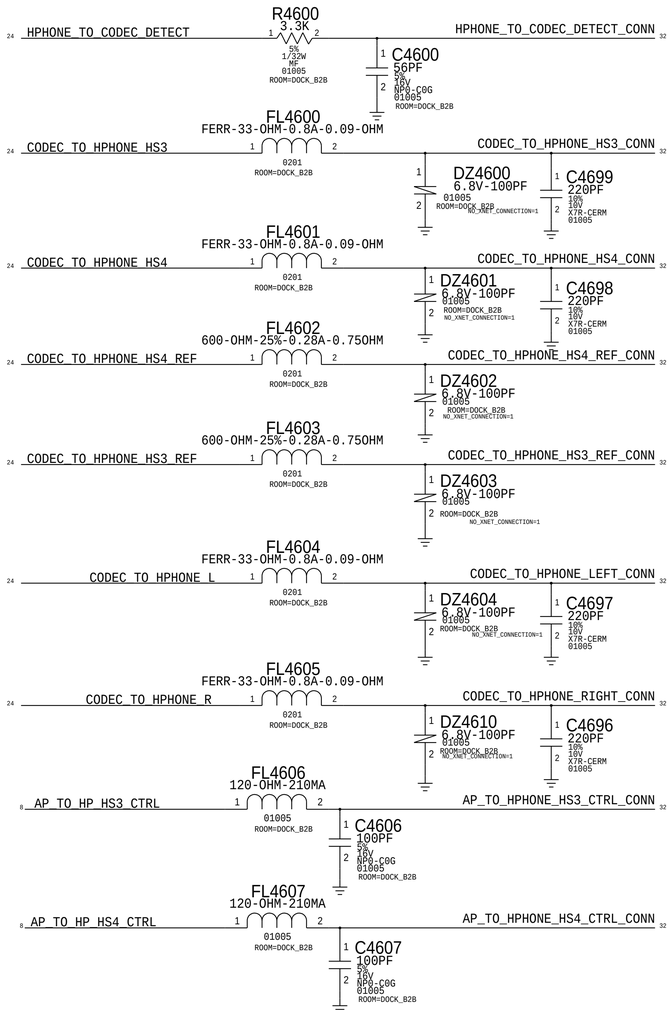
PROBE POINTS

TRISTAR_TO_TIGRIS_VBUS_OFF

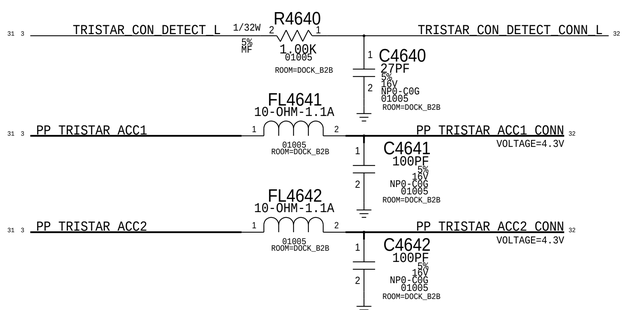
PP4500 P3MM-NSM ROOM=TRISTAR

DOCK FLEX CONNECTOR

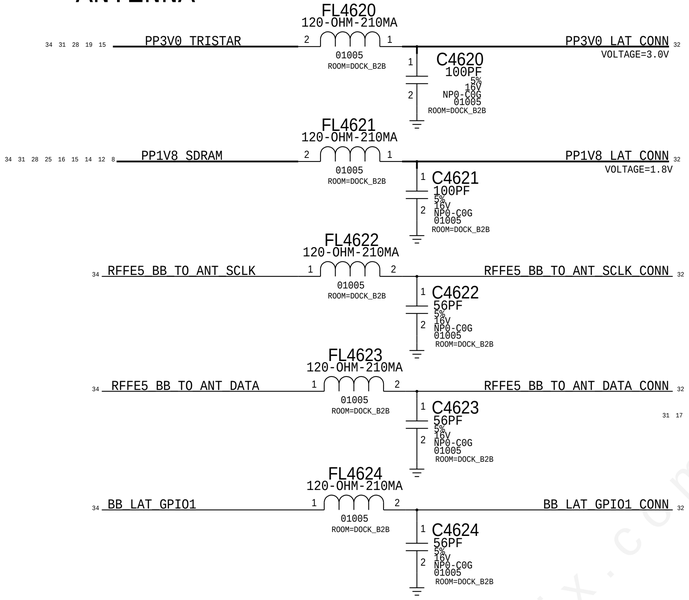
AUDIO JACK



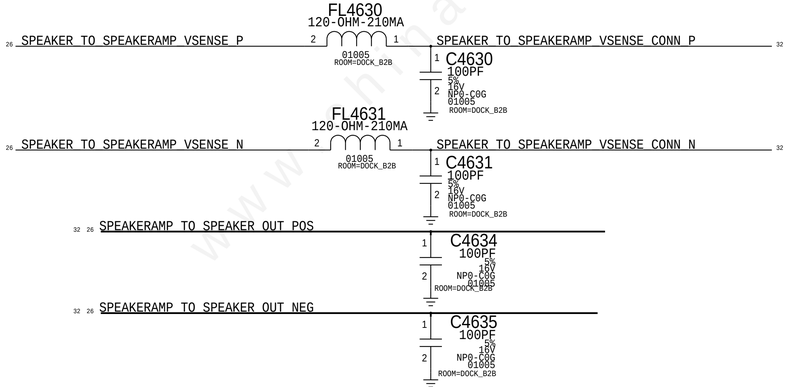
TRISTAR



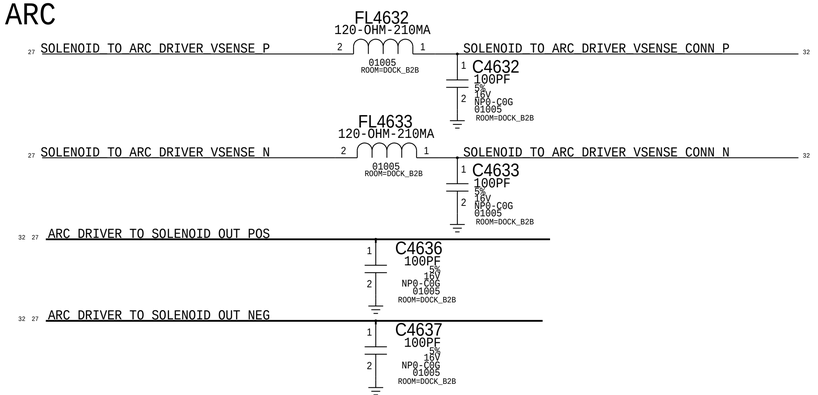
ANTENNA



SPEAKER



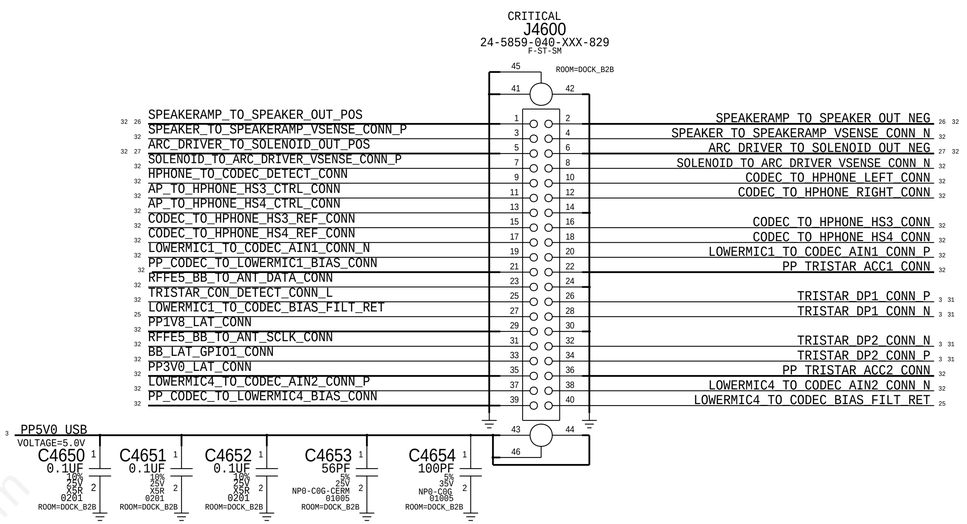
ARC



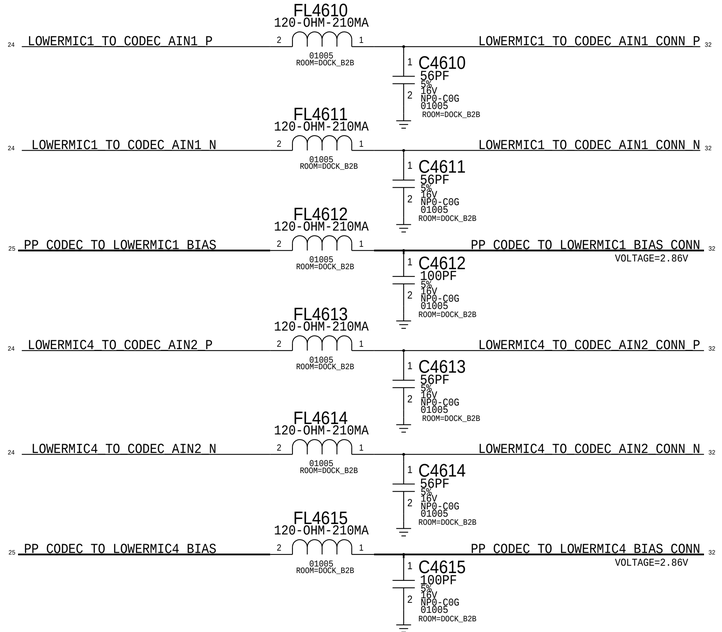
DOCK FLEX CONNECTOR

MLB: 516S00033 (RCPT)

FLEX: 516S00034 (PLUG)



LOWER MIC1/4



BUTTON FLEX

MIC2
ANC REF MIC

FL4700
120-OHM-210MA
01005
ROOM=BUTTON_B2B
25 PP_CODEC_TO_REARMIC2_BIAS
PP_CODEC_TO_REARMIC2_BIAS_CONN 33
VOLTAGE=2.86V
C4700
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4701
120-OHM-210MA
01005
ROOM=BUTTON_B2B
REARMIC2_TO_CODEC_AIN3_P
REARMIC2_TO_CODEC_AIN3_CONN_P 33
C4701
56PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4702
120-OHM-210MA
01005
ROOM=BUTTON_B2B
24 REARMIC2_TO_CODEC_AIN3_N
REARMIC2_TO_CODEC_AIN3_CONN_N 33
C4702
56PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

R4710
0.00
5%
1/32W
MF
01005
ROOM=BUTTON_B2B
34 16 9 8 BUTTON_HOLD_KEY_L
BUTTON_HOLD_KEY_CONN_L 33
C4710
27PF
5%
6.3V
NP0-C0G
0201
ROOM=BUTTON_B2B
DZ4710
5.5V-6.2PF
0201
ROOM=BUTTON_B2B

FL4711
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_RINGER_A
BUTTON_RINGER_A_CONN 33
C4711
27PF
5%
6.3V
NP0-C0G
0201
ROOM=L_BUTTON_B2B
DZ4711
5.5V-6.2PF
0201
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

FL4712
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_VOL_DOWN_L
BUTTON_VOL_DOWN_CONN_L 33
C4712
100PF
5%
16V
NP0-C0G
01005
ROOM=L_BUTTON_B2B
DZ4712
12V-33PF
01005-1
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

FL4713
120-OHM-210MA
01005
ROOM=L_BUTTON_B2B
34 16 8 BUTTON_VOL_UP_L
BUTTON_VOL_UP_CONN_L 33
C4713
100PF
5%
16V
NP0-C0G
01005
ROOM=L_BUTTON_B2B
DZ4713
12V-33PF
01005-1
ROOM=L_BUTTON_B2B
NORTH_AC_GND_SCREW 4 33

BUTTONS:
HOLD
RINGER
VOL UP/DOWN

RIGHT BUTTON FLEX CONNECTOR

MLB: 516S00047 (RCPT)
FLEX: 516S00046 (PLUG)
CRITICAL
ROOM=BUTTON_B2B

J4700
BM28P0.6-10DS-0.35V
F-ST-SM
11 12 PP_LED_DRIVER_COOL_LED 22 33
1 2 BUTTON_HOLD_KEY_CONN_L 33
3 4 REARMIC2_TO_CODEC_AIN3_CONN_P 33
5 6 REARMIC2_TO_CODEC_AIN3_CONN_N 33
7 8 PP_CODEC_TO_REARMIC2_BIAS_CONN 33
9 10 LED_MODULE_NTC_CONN 33
13 14 PP_LED_DRIVER_WARM_LED 22 33

LEFT BUTTON FLEX CONNECTOR

MLB: 516S1317
CRITICAL
ROOM=L_BUTTON_B2B

J4701
505066-0610
F-ST-SM
7 8
NC 1 2 BUTTON_VOL_DOWN_CONN_L 33
NC 3 4 BUTTON_VOL_UP_CONN_L 33
5 6
33 BUTTON_RINGER_A_CONN 9 10
XW4701
SHORT-10L-0.1MM-SM
1 2 LEFT_BTN_RTN

STROBE:
WARM LED
COOL LED
MODULE NTC

PP_LED_DRIVER_WARM_LED 22 33
C4723
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B
C4724
27PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

PP_LED_DRIVER_COOL_LED 22 33
C4721
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B
C4722
27PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

FL4720
120-OHM-210MA
01005
ROOM=BUTTON_B2B
22 LED_MODULE_NTC
LED_MODULE_NTC_CONN 33
R4720
51.1K
1%
1/32W
MF
01005
ROOM=BUTTON_B2B
C4720
100PF
5%
16V
NP0-C0G
01005
ROOM=BUTTON_B2B

SYNC_DATE=05/29/2014

BASEBAND, WLAN, BT & STOCKHOLM

SUBDESIGN_SUFFIX=RF

RADIO_MLB_MIMO

SHARED POWER

PP_VCC_MAIN	28 27 26 25 23 22 17 15 14 4 45 29
PP3V0_TRISTAR	37 32 31 28 19 15
PP1V8_SDRAM	39 32 31 28 25 16 15 14 12 8

BASEBAND

PCIE_AP_TO_BB_TXD_P	39 6	PCIE0_AP_TO_BB_TX_P
PCIE_AP_TO_BB_TXD_N	39 6	PCIE0_AP_TO_BB_TX_N
PCIE_BB_TO_AP_RXD_P	39 6	PCIE0_BB_TO_AP_TX_P
PCIE_BB_TO_AP_RXD_N	39 6	PCIE0_BB_TO_AP_TX_N
PCIE_AP_TO_BB_REFCLK_P	39 6	PCIE0_AP_TO_BB_REFCLK_P
PCIE_AP_TO_BB_REFCLK_N	39 6	PCIE0_AP_TO_BB_REFCLK_N
PCIE_AP_TO_BB_RESET_L	39 6	PCIE0_AP_TO_BB_PERST_L
PCIE_BB_BI_AP_CLKREQ_L	39 6	PCIE0_AP_TO_BB_CLKREQ_L
BB_TO_PMU_PCIE_HOST_WAKE_L	39 16	PCIE0_BB_TO_PMU_HOST_WAKE_L
AP_TO_BB_PCIE_DEV_WAKE	39 8	PCIE0_AP_TO_BB_DEV_WAKE
I2S_AP_TO_BB_LRCLK	39 8	I2S_AP_TO_BB_WS
I2S_AP_TO_BB_BCLK	39 8	I2S_AP_TO_BB_CLK
I2S_AP_TO_BB_DOUT	39 8	I2S_AP_TO_BB_TX
I2S_BB_TO_AP_DIN	39 8	I2S_BB_TO_AP_TX
AP_TO_BB_RADIO_ON_L	44 8	AP_TO_BBPMU_RADIO_ON_L
PMU_TO_BB_PMIC_RESET_L	39 16	PMU_TO_BBPMU_RESET_L
AP_TO_BB_RESET_L	44 8	AP_TO_BB_RST_L
BB_TO_AP_RESET_DETECT_L	43 8	BB_TO_AP_RESET_DET_L
BB_TO_LED_DRIVER_GSM_BURST_IND	39 28 22	BB_TO_AP_GSM_TXBURST_IND
AP_TO_BB_MESA_ON_L	39 8	AP_TO_BB_MESA_ON_L
BB_TO_AP_GPS_TIME_MARK	39 8	BB_TO_AP_GPS_TIME_MARK
AP_TO_BB_COREDUMP	39 8	AP_TO_BB_COREDUMP_TRIG
BB_IPC_GPIO	43 8	AP_TO_BB_IPC_GPIO
LCM_TO_OWL_BSYNC	39 30 9 8	TOUCH_TO_BBPMU_FORCE_PWM
UART_OWL_TO_BB_TXD	39 9	UART0_OWL_TO_BB_TX
UART_BB_TO_OWL_RXD	39 9	UART0_BB_TO_OWL_TX
USB_BB_DATA_P	42 31	USB_BB_P
USB_BB_DATA_N	42 31	USB_BB_N
PMU_TO_BB_USB_VBUS_DETECT	44 16	USB_BB_VBUS_DETECT
SWD_AP_PERIPHERAL_SWCLK	42 13 9	SWD_CLK_BB_JTAG_TCK
SWD_AP_BI_BB_SWDIO	39 9	SWD_IO_BB_JTAG_TMS
RFFE5_BB_TO_ANT_SCLK	36 32	75_RFFE5_SCLK_BB
RFFE5_BB_TO_ANT_DATA	36 32	75_RFFE5_SDATA_BB
BB_LAT_GPIO1	43 32	RFFE_BUFFER_LAT_GPIO1
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ANT

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I2C0_AP_SDA	39 28 16 8	I2C0_AP_SDA
I2C1_AP_SCL	39 31 27 26 17 8	I2C1_AP_SCL
I2C1_AP_SDA	39 31 27 26 17 8	I2C1_AP_SDA
BUTTON_HOLD_KEY_L	39 33 16 9 8	BUTTON_HOLD_KEY_L
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BUTTON_RINGER_A	39 33 16 8	BUTTON_RINGER_A
BUTTON_VOL_DOWN_L	39 33 16 8	BUTTON_VOL_DOWN_L
BUTTON_VOL_UP_L	39 33 16 8	BUTTON_VOL_UP_L
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NC_PMU_GPIO21	NO_TEST	PMU_GPIO21
NC_OWL_FUNC2	NO_TEST	OWL_FUNC2
NC_AP_RESERVED2	NO_TEST	AP_RESERVED2
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AP_TO_STOCKHOLM_DWLD_REQUEST	AP_TO_STOCKHOLM_FW_DWLD_REQ	7 60

1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
4	0003980769	ENGINEERING RELEASED	2015-03-27

N66 RADIO_MLB_MIMO - EVT_MD
MARCH 26, 2015

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HB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
353S00376	1	IC,PWR AMP,HB_PAD,TQS	UHBPA_RF	ROW
353S4494	1	IC,PWR AMP,HB_PAD,AVAGO	UHBPA_RF	RF2
353S00376	1	IC,PWR AMP,HB_PAD,TQS	UHBPA_RF	RFC

LB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
353S00461	1	IC,PWR AMP,LB_PAD,SKWS	ULBPA_RF	ROW
353S00056	1	IC,PWR AMP,LB_PAD,MURATA	ULBPA_RF	RF2
353S00461	1	IC,PWR AMP,LB_PAD,SKWS	ULBPA_RF	RFC

VINYL

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
337S00125	1	IC, VINYL	U5101_RF	ROW
337S00125	1	IC, VINYL	U5101_RF	RF2

VINYL RESISTOR

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
117S0161	1	0 OHM, RESISTOR	R3402_RF	RFC

RFC LB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0555	1	1.0PF, CAPACITOR	L4203_RF	RFC
152S00158	1	4.1NH, INDUCTOR	C4205_RF	RFC
131S0425	1	0.5PF, CAPACITOR	L4204_RF	RFC
152S2053	1	4.7NH, INDUCTOR	C4206_RF	RFC
131S0555	1	1.0PF, CAPACITOR	L4205_RF	RFC
152S00027	1	3.7NH, INDUCTOR	C4207_RF	RFC
131S0557	1	0.7PF, CAPACITOR	L4206_RF	RFC
152S2001	1	2.4NH, INDUCTOR	C4208_RF	RFC
131S0351	1	0.4PF, CAPACITOR	L4207_RF	RFC
152S2002	1	2.7NH, INDUCTOR	C4209_RF	RFC
152S2002	1	2.7NH, INDUCTOR	C4211_RF	RFC
152S2056	1	5.6NH, INDUCTOR	C4212_RF	RFC
131S0340	1	2.0PF, CAPACITOR	L4219_RF	RFC
152S2021	1	1.5NH, INDUCTOR	C4213_RF	RFC
118S0724	1	0 OHM, RESISTOR	R4201_RF	RFC
131S0551	1	1.2PF, CAPACITOR	L4601_RF	RFC
152S1342	1	15NH, INDUCTOR	L3902_RF	RFC
131S0630	1	27PF, CAPACITOR	C3902_RF	RFC

ROW LB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0555	1	1.0PF, CAPACITOR	L4203_RF	ROW
152S00158	1	4.1NH, INDUCTOR	C4205_RF	ROW
131S0425	1	0.5PF, CAPACITOR	L4204_RF	ROW
152S2053	1	4.7NH, INDUCTOR	C4206_RF	ROW
131S0555	1	1.0PF, CAPACITOR	L4205_RF	ROW
152S00027	1	3.7NH, INDUCTOR	C4207_RF	ROW
131S0557	1	0.7PF, CAPACITOR	L4206_RF	ROW
152S2001	1	2.4NH, INDUCTOR	C4208_RF	ROW
131S0351	1	0.4PF, CAPACITOR	L4207_RF	ROW
152S2002	1	2.7NH, INDUCTOR	C4209_RF	ROW
152S2002	1	2.7NH, INDUCTOR	C4211_RF	ROW
152S2056	1	5.6NH, INDUCTOR	C4212_RF	ROW
131S0340	1	2.0PF, CAPACITOR	L4219_RF	ROW
152S2021	1	1.5NH, INDUCTOR	C4213_RF	ROW
118S0724	1	0 OHM, RESISTOR	R4201_RF	ROW
131S0551	1	1.2PF, CAPACITOR	L4601_RF	ROW
152S1342	1	15NH, INDUCTOR	L3902_RF	ROW
131S0630	1	27PF, CAPACITOR	C3902_RF	ROW

ROW HB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1907	1	3.3NH, INDUCTOR	L4105_RF	ROW
152S2007	1	8.2NH, INDUCTOR	L4401_RF	ROW
131S0426	1	22PF, CAPACITOR	C4405_RF	ROW
152S2042	1	1.8NH, INDUCTOR	C4406_RF	ROW
131S0425	1	0.5PF, CAPACITOR	L4407_RF	ROW
152S2041	1	10.0NH, INDUCTOR	L4403_RF	ROW
131S00071	1	33PF, CAPACITOR	C4407_RF	ROW
152S00143	1	15NH, INDUCTOR	L4404_RF	ROW
131S00071	1	33PF, CAPACITOR	C4408_RF	ROW
117S0108	1	51 OHM, RESISTOR	L4410_RF	ROW
131S0599	1	1.5PF, CAPACITOR	C3921_RF	ROW
152S00052	1	3.4NH, INDUCTOR	L3910_RF	ROW
117S0201	1	0 OHM, RESISTOR	L3911_RF	ROW
152S2039	1	3.8NH, INDUCTOR	L3919_RF	ROW
131S0414	1	5.0PF, CAPACITOR	C4410_RF	ROW

RFC HB PAD MATCHING BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1907	1	3.3NH, INDUCTOR	L4105_RF	RFC
152S2007	1	8.2NH, INDUCTOR	L4401_RF	RFC
131S0426	1	22PF, CAPACITOR	C4405_RF	RFC
152S2042	1	1.8NH, INDUCTOR	C4406_RF	RFC
131S0425	1	0.5PF, CAPACITOR	L4407_RF	RFC
152S2041	1	10.0NH, INDUCTOR	L4403_RF	RFC
131S00071	1	33PF, CAPACITOR	C4407_RF	RFC
152S00143	1	15NH, INDUCTOR	L4404_RF	RFC
131S00071	1	33PF, CAPACITOR	C4408_RF	RFC
117S0108	1	51 OHM, RESISTOR	L4410_RF	RFC
131S0599	1	1.5PF, CAPACITOR	C3921_RF	RFC
152S00052	1	3.4NH, INDUCTOR	L3910_RF	RFC
117S0201	1	0 OHM, RESISTOR	L3911_RF	RFC
152S2039	1	3.8NH, INDUCTOR	L3919_RF	RFC
131S0414	1	5.0PF, CAPACITOR	C4410_RF	RFC

RF2 HB PAD MATCHING BOM OPTIONS

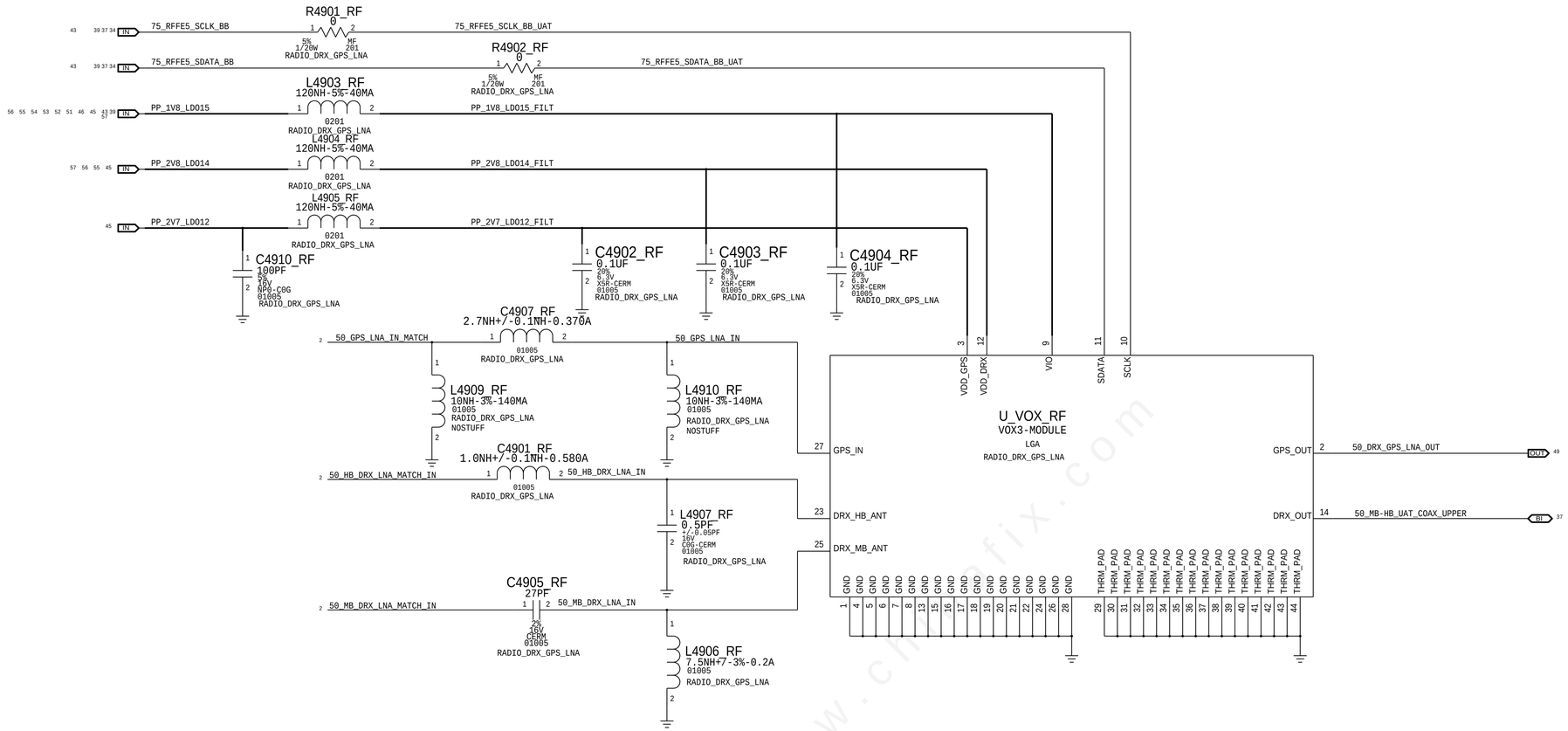
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S1990	1	3.0NH, INDUCTOR	L4105_RF	RF2
131S0377	1	1.2PF, CAPACITOR	C4108_RF	RF2
131S0631	1	0.3PF, CAPACITOR	L4401_RF	RF2
152S2042	1	1.8NH, INDUCTOR	C4405_RF	RF2
152S2042	1	1.8NH, INDUCTOR	C4406_RF	RF2
131S0631	1	0.3PF, CAPACITOR	L4407_RF	RF2
131S00001	1	0.1PF, CAPACITOR	L4403_RF	RF2
152S2051	1	1.3NH, INDUCTOR	C4407_RF	RF2
152S2051	1	1.3NH, INDUCTOR	C4408_RF	RF2
131S0805	1	100PF, CAPACITOR	C4409_RF	RF2
131S0431	1	0.2PF, CAPACITOR	L4410_RF	RF2
131S0381	1	1.6PF, CAPACITOR	C3921_RF	RF2
152S00027	1	3.7NH, INDUCTOR	L3910_RF	RF2
117S0201	1	0 OHM, RESISTOR	L3911_RF	RF2
152S2045	1	3.0NH, INDUCTOR	L3919_RF	RF2
152S00052	1	3.4NH, INDUCTOR	L3912_RF	RF2
131S0599	1	1.5PF, CAPACITOR	C3922_RF	RF2
131S0630	1	27PF, CAPACITOR	C3911_RF	RF2
131S0414	1	5.0PF, CAPACITOR	C4410_RF	RF2

RF2 LB PAD MATCHING BOM OPTIONS

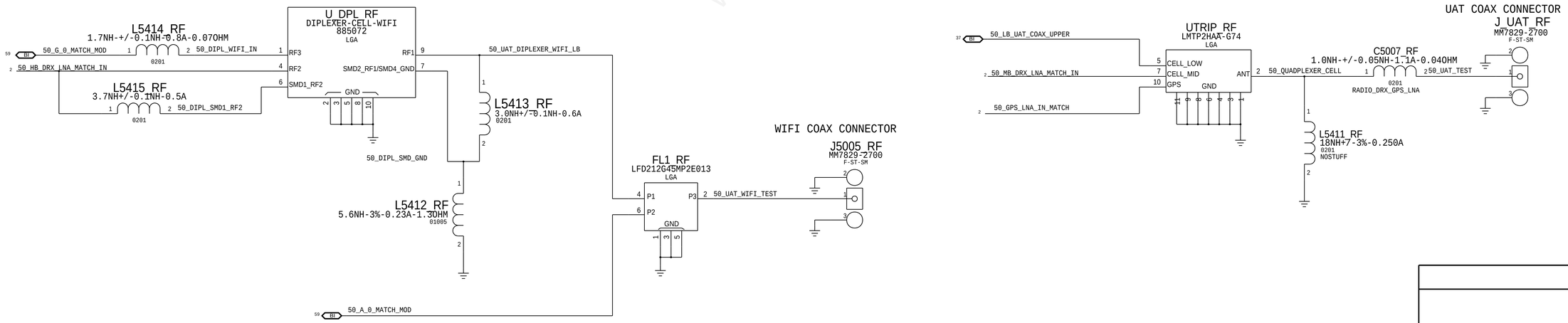
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0551	1	1.2PF, CAPACITOR	L4203_RF	RF2
152S2004	1	3.3NH, INDUCTOR	C4205_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4204_RF	RF2
152S2020	1	3.6NH, INDUCTOR	C4206_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4205_RF	RF2
152S00202	1	4.0NH, INDUCTOR	C4207_RF	RF2
131S0336	1	1.3PF, CAPACITOR	L4206_RF	RF2
152S2022	1	4.3NH, INDUCTOR	C4208_RF	RF2
131S0555	1	1.0PF, CAPACITOR	L4207_RF	RF2
152S00052	1	3.4NH, INDUCTOR	C4209_RF	RF2
131S0551	1	1.2PF, CAPACITOR	L4209_RF	RF2
152S00158	1	4.1NH, INDUCTOR	C4211_RF	RF2
131S00070	1	1.3PF, CAPACITOR	L4210_RF	RF2
152S00180	1	4.2NH, INDUCTOR	C4212_RF	RF2
131S0560	1	1.1PF, CAPACITOR	L4211_RF	RF2
152S00027	1	3.7NH, INDUCTOR	C4213_RF	RF2
152S00202	1	4.0NH, INDUCTOR	L4201_RF	RF2
152S2045	1	3.0NH, INDUCTOR	R4201_RF	RF2
152S2056	1	5.6NH, INDUCTOR	L4202_RF	RF2
152S1996	1	15NH, INDUCTOR	C3913_RF	RF2
131S00074	1	30PF, CAPACITOR	L3902_RF	RF2
152S1995	1	12NH, INDUCTOR	C3902_RF	RF2

N66-SPECIFIC RADIO PAGE 2

DIVERSITY LNA

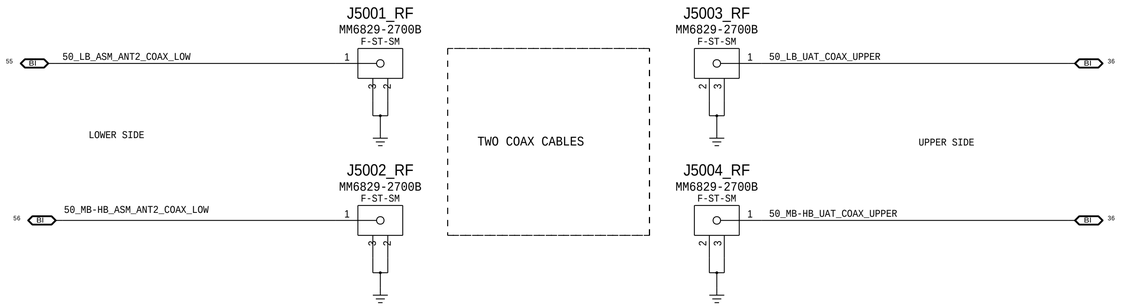


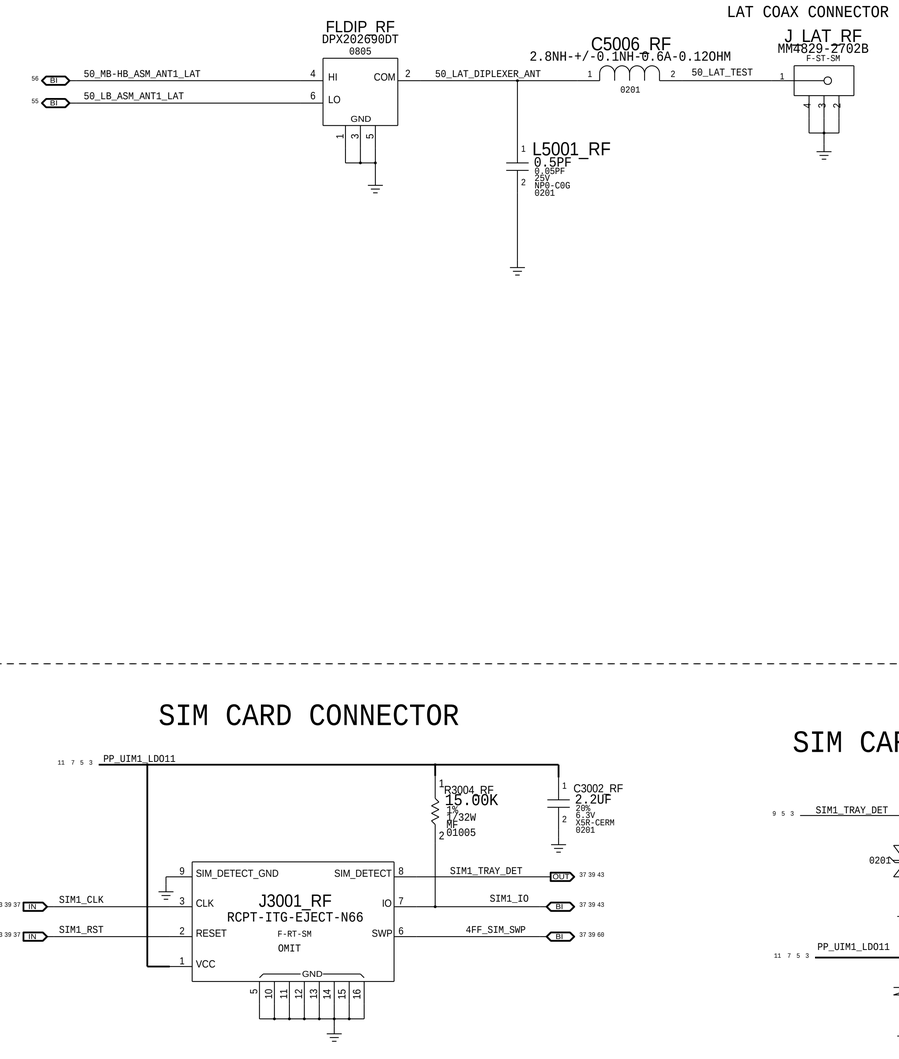
UAT ANT FEED



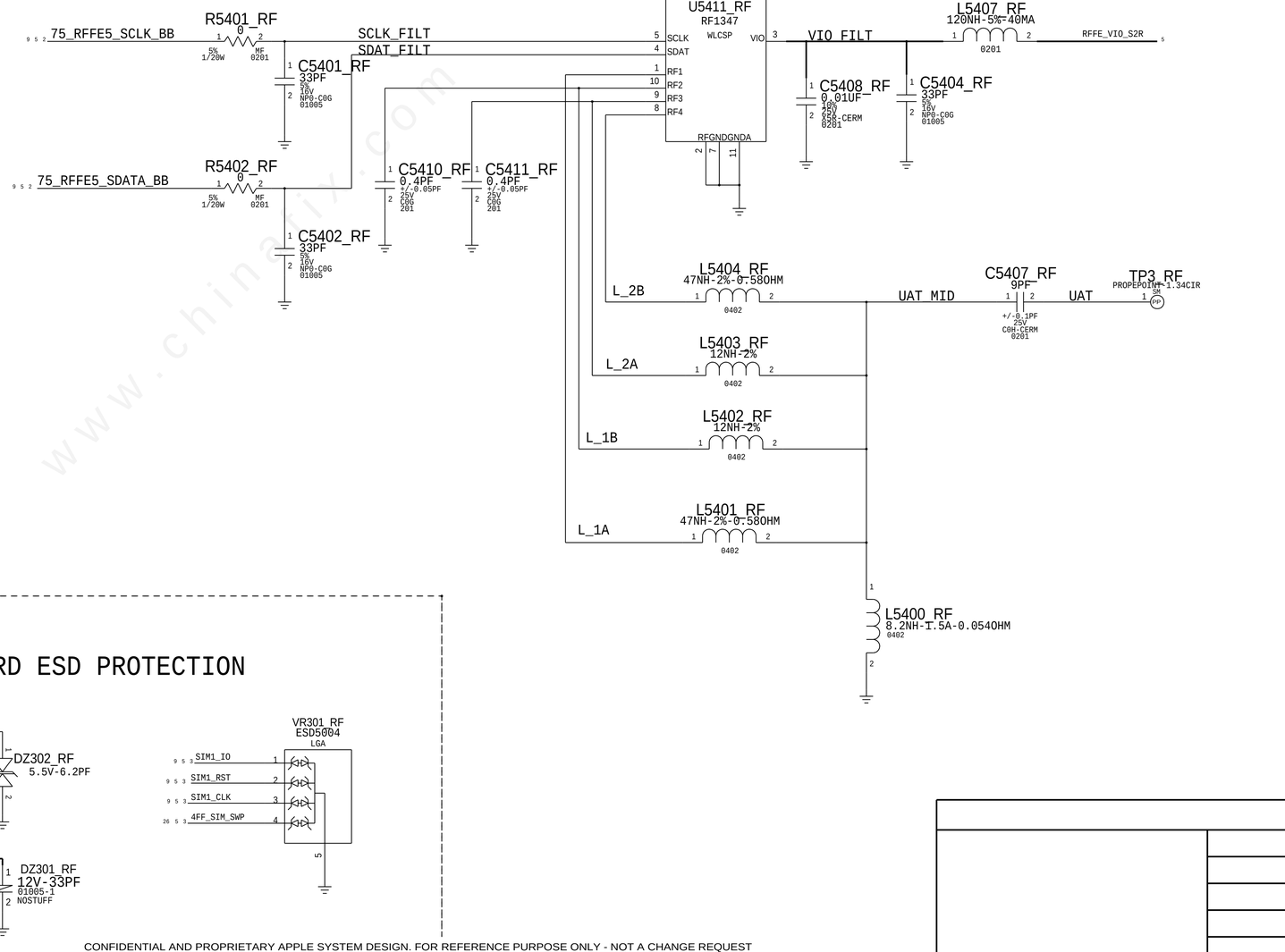
N66-SPECIFIC RADIO PAGE 3

ANTENNA FEEDS AND CONNECTORS





UAT TUNER



SIM CARD CONNECTOR

SIM CARD ESD PROTECTION

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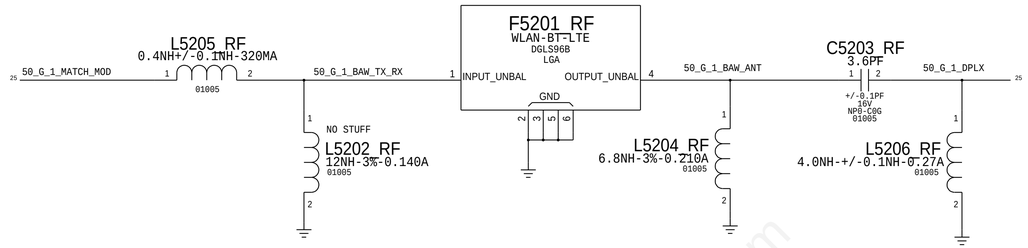
WLAN LAT 2.4GHZ BAW BPF



PAGE TITLE

SIZE

AP TO BB/WLAN/BT/SH CONNECTIONS

BASEBAND

PP_VCC_MAIN (IO)
AP_TO_BBPMU_RADIO_ON_L (IN)
PMU_TO_BBPMU_RESET_L (IN)
AP_TO_BB_RST_L (IN)
BB_TO_AP_RESET_DET_L (OUT) — SINGLE_NODENET
BB_TO_AP_GSM_TXBURST_IND (OUT)
AP_TO_BB_MESA_ON_L (IN)
BB_TO_AP_GPS_TIME_MARK (OUT)
AP_TO_BB_COREDUMP_TRIG (IN)
AP_TO_BB_IPC_GPIO (IN)
TOUCH_TO_BBPMU_FORCE_PWM (IN)

UART0_BB_TO_OWL_TX (OUT)
UART0_OWL_TO_BB_TX (IN)

PCIE0_AP_TO_BB_REFCLK_P (IN)
PCIE0_AP_TO_BB_REFCLK_N (IN)

PCIE0_AP_TO_BB_TX_P (IN)
PCIE0_AP_TO_BB_TX_N (IN)

PCIE0_BB_TO_AP_TX_P (OUT)
PCIE0_BB_TO_AP_TX_N (OUT)

PCIE0_AP_TO_BB_PERST_L (IN)
PCIE0_AP_TO_BB_CLKREQ_L (IN)
PCIE0_BB_TO_PMU_HOST_WAKE_L (OUT)
PCIE0_AP_TO_BB_DEV_WAKE (IN)

I2S_AP_TO_BB_WS (IN)
I2S_AP_TO_BB_CLK (IN)
I2S_AP_TO_BB_TX (IN)
I2S_BB_TO_AP_TX (OUT)

USB_BB_P (OUT)
USB_BB_N (OUT)
USB_BB_VBUS_DETECT (IN)

SWD_CLK_BB_JTAG_TCK (IN)
SWD_IO_BB_JTAG_TMS (IN)

RFFE_BUFFER_LAT_GPIO1 (OUT)
75_RFFE5_SDATA_BB (OUT)
75_RFFE5_SCLK_BB (OUT)
PP3V0_TRISTAR (IN)

BB_TO_PMU_AMUX_SMPS1 (OUT)
BB_TO_PMU_AMUX_SMPS3 (OUT)
BB_TO_PMU_AMUX_SMPS4 (OUT)
BB_TO_PMU_AMUX_LDO11_SIM1 (OUT)

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PMU_TO_WLAN_32K_CLK (IN)
PMU_TO_WLAN_REG_ON (IN)
PMU_TO_BT_REG_ON (IN)
WLAN_TO_PMU_HOST_WAKE (OUT)
BT_TO_PMU_HOST_WAKE (OUT)
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UART1_AP_TO_BT_TX (IN)
UART1_BT_TO_AP_TX (OUT)
UART1_AP_TO_BT_RTS_L (IN)
UART1_BT_TO_AP_RTS_L (OUT)

I2S_AP_TO_BT_BCLK (IN)
I2S_AP_TO_BT_LRCK (IN)
I2S_BT_TO_AP_DOUT (OUT)
I2S_AP_TO_BT_DOUT (IN)

UART4_AP_TO_WLAN_TX (IN)
UART4_WLAN_TO_AP_TX (OUT)
UART4_WLAN_TO_AP_RTS_L (OUT)
UART4_AP_TO_WLAN_RTS_L (IN)

PCIE_WLAN_TO_AP_CLKREQ_L (OUT)
PCIE_AP_TO_WLAN_PERST_L (IN)
PCIE_AP_TO_WLAN_DEV_WAKE (IN)
PCIE_AP_TO_WLAN_TX_P (IN)
PCIE_AP_TO_WLAN_TX_N (IN)
PCIE_AP_TO_WLAN_REFCLK_P (IN)
PCIE_AP_TO_WLAN_REFCLK_N (IN)
PCIE_WLAN_TO_AP_TX_P (OUT)
PCIE_WLAN_TO_AP_TX_N (OUT)

OWL_TO_WLAN_CONTEXT_A (IN)
OWL_TO_WLAN_CONTEXT_B (IN)

AP DEBUG

PP1V8 (IN)
FORCE_DFU (OUTP)
DFU_STATUS (IN)
PMU_AMUX_AY (IN)
PMU_AMUX_BY (IN)
PMU_TO_SYSTEM_COLD_RESET_L (IN)
I2C0_AP_SDA (IO)
I2C0_AP_SCL (IO)
I2C1_AP_SDA (IO)
I2C1_AP_SCL (IO)
BUTTON_HOLD_KEY_L (OUTP)
BUTTON_MENU_KEY_L (OUTP)
BUTTON_VOL_DOWN_L (OUTP)
BUTTON_VOL_UP_L (OUTP)
BUTTON_RINGER_A (OUTP)
PMU_GPIO20 (IO)
PMU_GPIO21 (IO)
OWL_FUNC2 (IO)
AP_RESERVED0 (IN)
AP_RESERVED1 (IN)
AP_RESERVED2 (IN)

STOCKHOLM

PP1V8_SDRAM (IN)
AP_TO_STOCKHOLM_SIM_SEL
STOCKHOLM_TO_PMU_HOST_WAKE (OUT)
AP_TO_STOCKHOLM_FW_DWLD_REQ (IN)
PMU_TO_STOCKHOLM_EN (IN)
AP_TO_STOCKHOLM_DEV_WAKE (IN)
UART3_AP_TO_STOCKHOLM_TXD (IN)
UART3_STOCKHOLM_TO_AP_TXD (OUT)
UART3_AP_TO_STOCKHOLM_RTS_L (IN)
UART3_STOCKHOLM_TO_AP_RTS_L (OUT)

ANT

STOCKHOLM_ANT (IN)

POWER

PP1V8_SDRAM, VOLTAGE=1.8V — MAKE_BASE=TRUE
- PP_1V8_S2R_VDDIO_WLAN_BT, VOLTAGE=1.8V
- PP_STOCKHOLM_1V8_S2R, VOLTAGE=1.8V
- RFFE_VIO_S2R, VOLTAGE=1.8V

MLB PROBE POINTS

PCIE

PP3073_RF — P2MM-NSM — PCIE0_AP_TO_BB_PERST_L — OMIT, RADIO_DEBUG
PP3074_RF — P2MM-NSM — PCIE0_BB_TO_PMU_HOST_WAKE_L — OMIT, RADIO_DEBUG
PP3075_RF — P2MM-NSM — PCIE0_AP_TO_BB_CLKREQ_L — OMIT
PP3076_RF — P2MM-NSM — PCIE0_AP_TO_BB_DEV_WAKE — OMIT, RADIO_DEBUG
PP3080_RF — P2MM-NSM — PCIE0_AP_TO_BB_REFCLK_P — OMIT, RADIO_DEBUG
PP3081_RF — P2MM-NSM — PCIE0_AP_TO_BB_REFCLK_N — OMIT, RADIO_DEBUG
PP3082_RF — P2MM — PCIE0_BB_TO_AP_TX_P — OMIT, RADIO_DEBUG
PP3083_RF — P2MM — PCIE0_BB_TO_AP_TX_N — OMIT, RADIO_DEBUG
PP3084_RF — P2MM-NSM — PCIE0_AP_TO_BB_TX_P — OMIT, RADIO_DEBUG
PP3085_RF — P2MM-NSM — PCIE0_AP_TO_BB_TX_N — OMIT, RADIO_DEBUG
PP3090_RF — P2MM-NSM — BB_JTAG_SRST_L — OMIT, RADIO_DEBUG
PP3091_RF — P2MM-NSM — SWD_IO_BB_JTAG_TMS — OMIT, RADIO_DEBUG

PMU

PP3032_RF — P2MM — PMIC_RESOUT_L — OMIT, RADIO_DEBUG
PP3033_RF — P2MM — 50_SLEEP_CLK_32K — OMIT, RADIO_DEBUG
PP3034_RF — P2MM — XO_OUT_D0_EN — OMIT, RADIO_DEBUG
PP3036_RF — P2MM-NSM — SPMI_CLK — OMIT, RADIO_DEBUG
PP3037_RF — P2MM-NSM — SPMI_DATA — OMIT, RADIO_DEBUG

BASEBAND

PP3017_RF — P2MM-NSM — BB_DEBUG_ERROR — OMIT
PP3018_RF — P2MM — 50_MDM_PCIE_CLK — OMIT, RADIO_DEBUG
PP3019_RF — P2MM-NSM — 50_BBPMU_TO_STOCKHOLM_19P2M_CLK — OMIT
PP3006_RF — P2MM-NSM — STOCKHOLM_TO_BBPMU_CLK_REQ — OMIT, RADIO_DEBUG
PP3007_RF — P2MM — TOUCH_TO_BBPMU_FORCE_PWM — OMIT, RADIO_DEBUG

PP3008_RF — P2MM — I2S_AP_TO_BB_WS — OMIT, RADIO_DEBUG
PP3009_RF — P2MM — I2S_AP_TO_BB_CLK — OMIT, RADIO_DEBUG
PP3010_RF — P2MM — I2S_AP_TO_BB_TX — OMIT, RADIO_DEBUG
PP3011_RF — P2MM — I2S_BB_TO_AP_TX — OMIT, RADIO_DEBUG
PP3012_RF — P2MM — AP_TO_BB_MESA_ON_L — OMIT, RADIO_DEBUG
PP3013_RF — P2MM-NSM — BB_TO_AP_GSM_TXBURST_IND — OMIT, RADIO_DEBUG
PP3014_RF — P2MM — BB_TO_AP_GPS_TIME_MARK — OMIT, RADIO_DEBUG
PP3015_RF — P2MM — AP_TO_BB_COREDUMP_TRIG — OMIT, RADIO_DEBUG
PP3016_RF — P2MM-NSM — UART0_BB_TO_OWL_TX — OMIT, RADIO_DEBUG
PP3020_RF — P2MM-NSM — UART0_OWL_TO_BB_TX — OMIT, RADIO_DEBUG

ANT TUNER

PP3001_RF — P2MM-NSM — 75_RFFE5_SDATA_BB (2 3 5 9) — OMIT, RADIO_DEBUG
PP3002_RF — P2MM-NSM — 75_RFFE5_SCLK_BB (2 3 5 9) — OMIT, RADIO_DEBUG
PP3003_RF — P2MM-NSM — PP3V0_TRISTAR (9 5) — OMIT, RADIO_DEBUG
PP3004_RF — P2MM-NSM — PP1V8_SDRAM (5) — OMIT, RADIO_DEBUG
PP3005_RF — P2MM — PP_1V8_LDO15 (2 9 11 12 17 18 19 20 21 22 23) — OMIT, RADIO_DEBUG

RFFE

PP3056_RF — P2MM — 75_RFFE1_SDATA_BB (9 16) — OMIT, RADIO_DEBUG
PP3077_RF — P2MM — 75_RFFE4_SDATA_BB (9 12) — OMIT, RADIO_DEBUG
PP3051_RF — P2MM — 75_RFFE5_SCLK_BB_BUFFER (9) — OMIT, RADIO_DEBUG
PP3052_RF — P2MM-NSM — 75_RFFE5_SDATA_BB_BUFFER (9) — OMIT
PP3053_RF — P2MM — 75_RFFE2_SDATA_BB (9 17 18 19 20 21 22) — OMIT, RADIO_DEBUG
PP3054_RF — P2MM-NSM — 75_RFFE3_SDATA_BB (9 23) — OMIT

STOCKHOLM

PP3062_RF — P2MM-NSM — STOCKHOLM_DWPM_DBG (26) — OMIT
PP3063_RF — P2MM-NSM — STOCKHOLM_DWPS_DBG (26) — OMIT
PP3064_RF — P2MM-NSM — UART3_AP_TO_STOCKHOLM_TXD (5 26) — OMIT
PP3065_RF — P2MM-NSM — UART3_STOCKHOLM_TO_AP_TXD (5 26) — OMIT
PP3066_RF — P2MM-NSM — UART3_AP_TO_STOCKHOLM_RTS_L (5 26) — OMIT
PP3067_RF — P2MM-NSM — UART3_STOCKHOLM_TO_AP_RTS_L (5 26) — OMIT

DEBUG CONNECTOR

NOSTUFF
J3000_RF
AXE550124
F-ST-SM

1	2		
3	4		
5	6		
7	8		
9	10		
11	12	SIM1_CLK	(3 9)
13	14	SIM1_RST	(3 9)
15	16	SIM1_IO	(3 9)
17	18	PP_UIM1_LDO11	(3 7 11)
19	20	SIM1_TRAY_DET	(3 9)
21	22	4FF_SIM_SWP	(3 26)
23	24	I2C1_AP_SDA	(5)
25	26	I2C1_AP_SCL	(5)
27	28	BUTTON_HOLD_KEY_L	(5)
29	30	BUTTON_MENU_KEY_L	(5)
31	32	PP1V8	(5)
33	34	FORCE_DFU	(5)
35	36	SIM2_CLK	(9 24)
37	38	PP_UIM2_LDO13	(7 11 24)
39	40		
41	42		
43	44		
45	46		
47	48		
49	50		
52	54		
51	53		

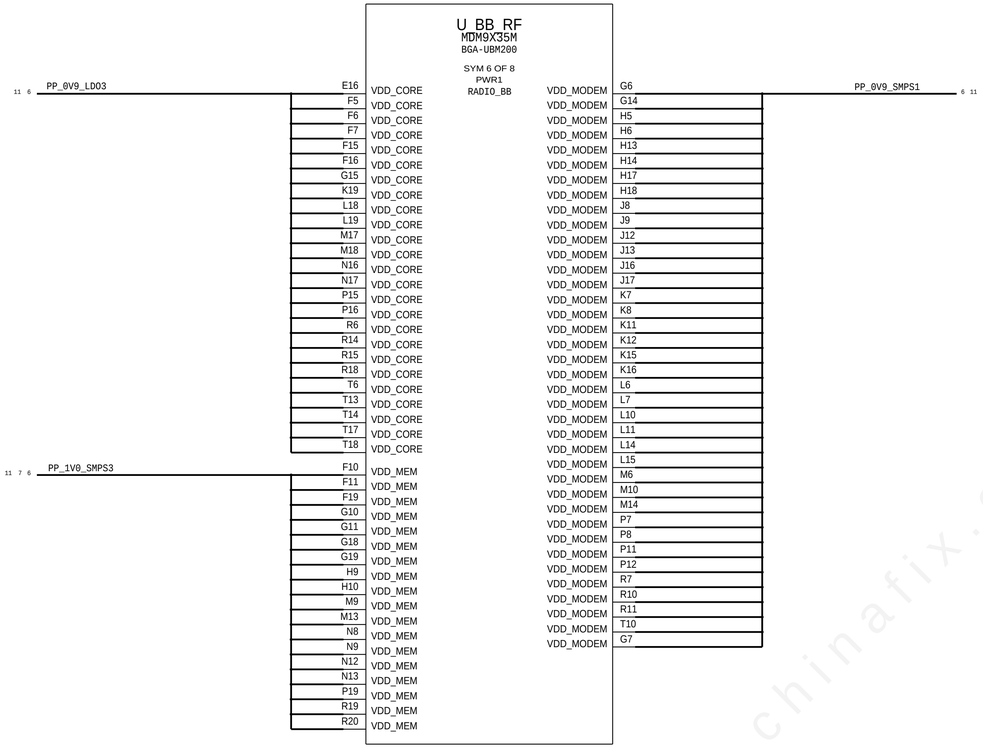
UART_WLAN_TO_BB_COEX_TX (25 9)
I2C0_AP_SDA (5)
I2C0_AP_SCL (5)
BUTTON_VOL_DOWN_L (5)
BUTTON_VOL_UP_L (5)
BUTTON_RINGER_A (5)
SIM2_RESET (24 9 5)
SIM2_DATA (24 9)
UART_BB_TO_WLAN_COEX_TX (25 9)
SIM2_DETECT (9)
SIM2_DATA_R (24)

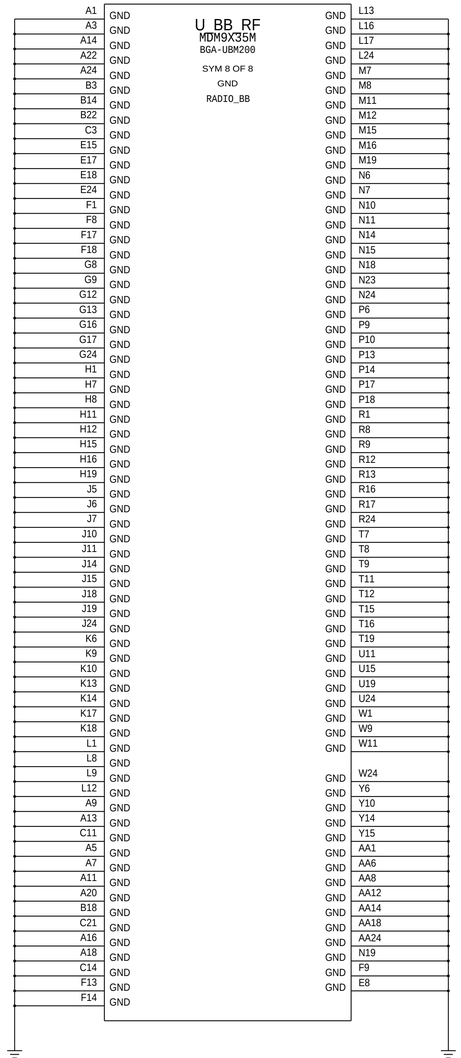
ESD CAPS

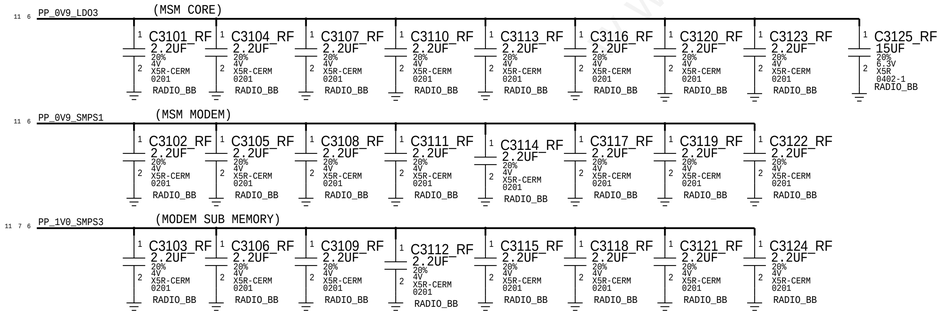
PCIE0_AP_TO_BB_PERST_L (9 5)
BB_JTAG_SRST_L (8 5)
PMU_TO_BBPMU_RESET_L (10 5)
SIM2_RESET (24 9 5)

C5101_RF	100PF	5% 16V	NP0-C0G 01005
C3503_RF	100PF	5% 16V	NP0-C0G 01005
C3312_RF	100PF	5% 16V	NP0-C0G 01005 RADIO_BB
C3408_RF	100PF	5% 16V	NP0-C0G 01005 RADIO_BB

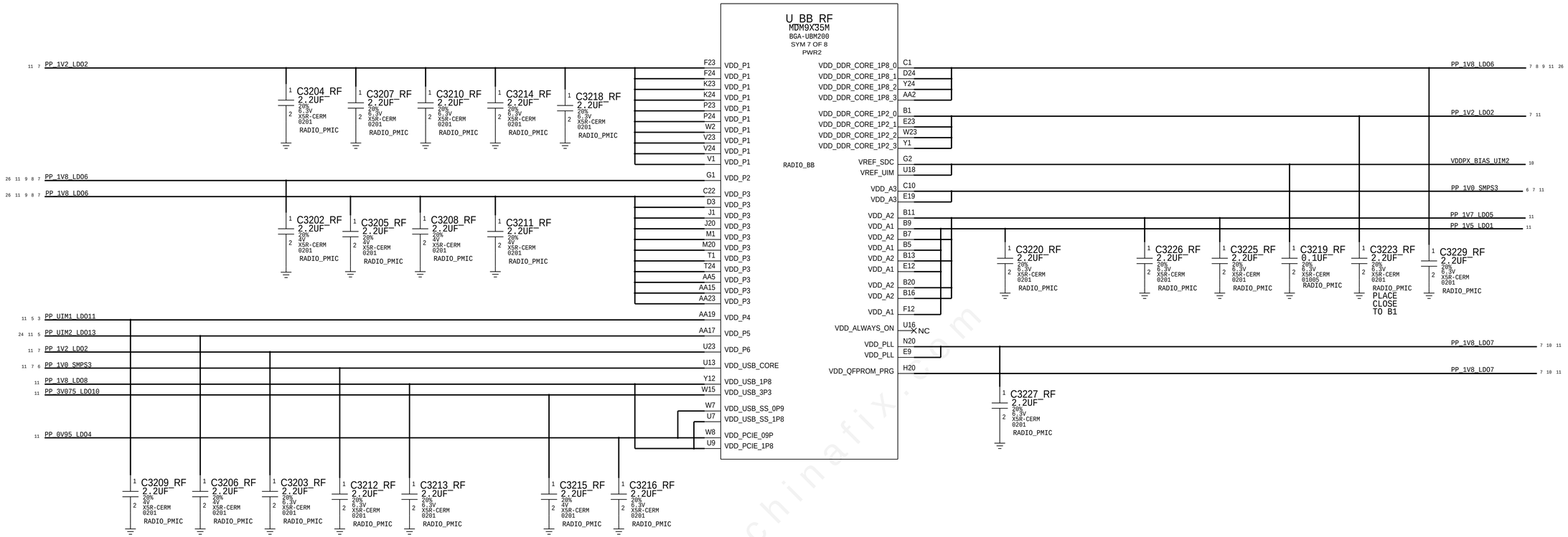
BASEBAND: POWER 1





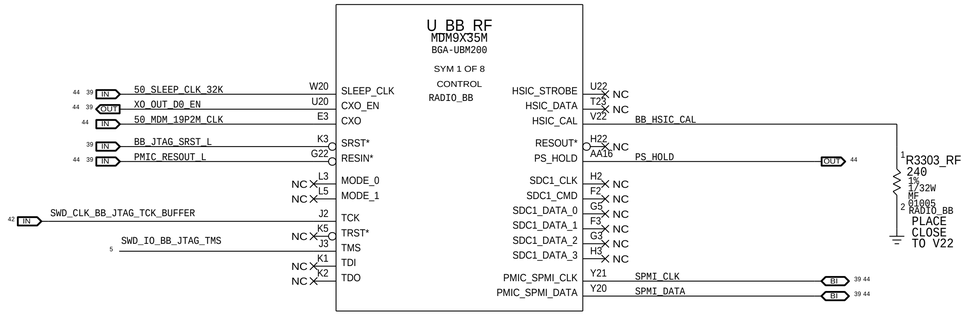


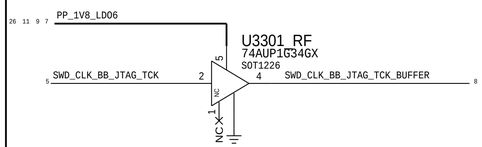
BASEBAND: POWER 2

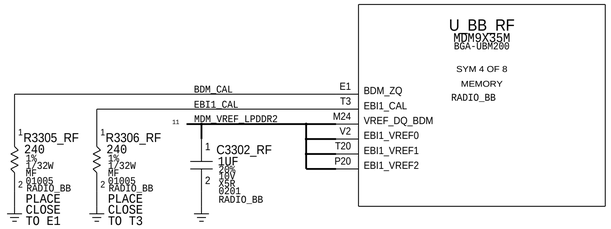


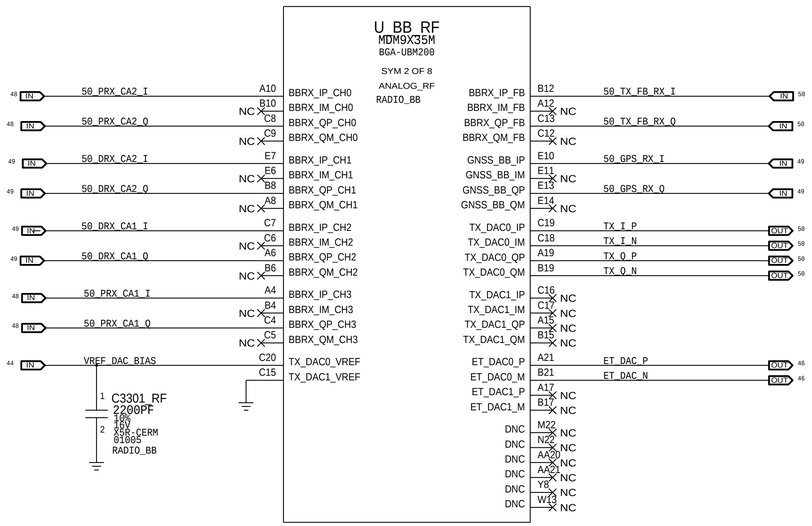
SIZE D

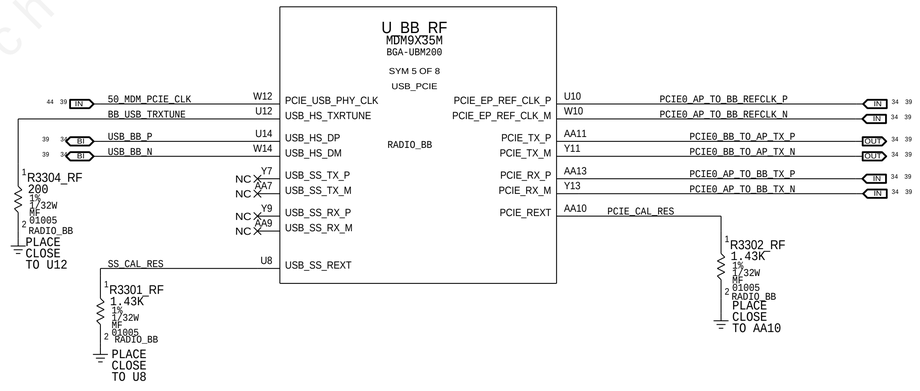
BASEBAND: CONTROL AND INTERFACES



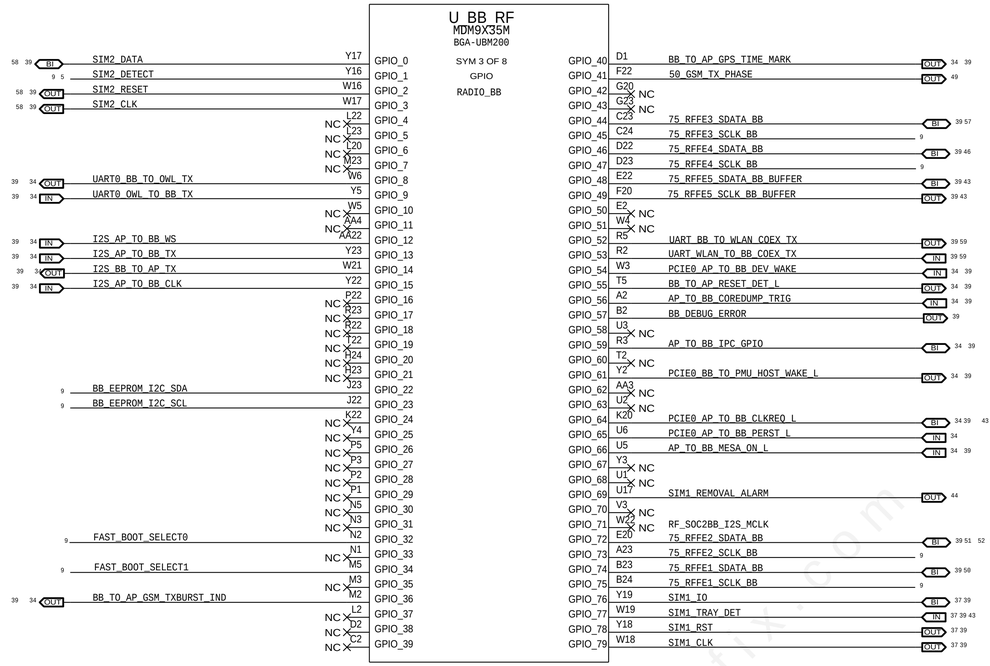


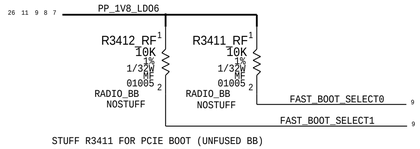






BASEBAND: GPIOS

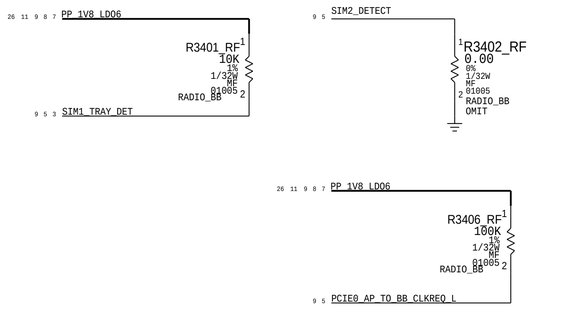




STUFF R3411 FOR PCIE BOOT (UNFUSED BB)
STUFF R3412 FOR USB BOOT (UNFUSED BB)

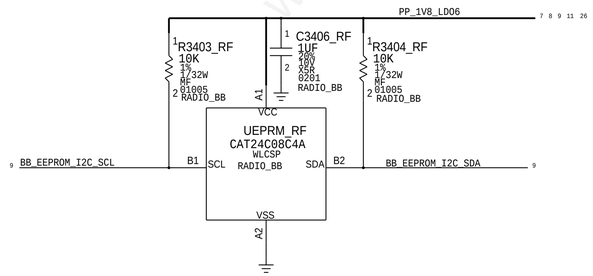
OPTION	SEL2	SEL1	SEL0
GPIO	35	34	32
PCIE	0	0	1
HSUSB	0	1	0
HSIC	0	1	1

NOSTUFF R3402 WHEN VINLY PRESENT
STUFF R3402 WHEN VINLY NOT PRESENT

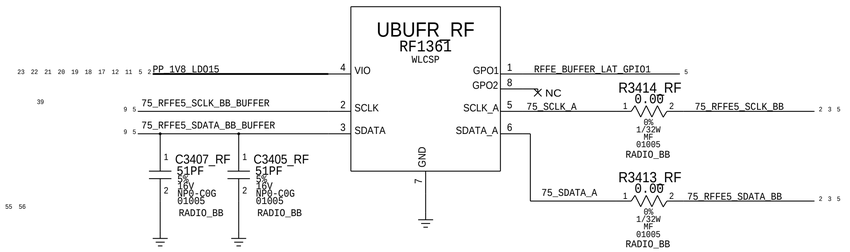


PCIE PULL-UPS TO BB RAIL

BB EEPROM

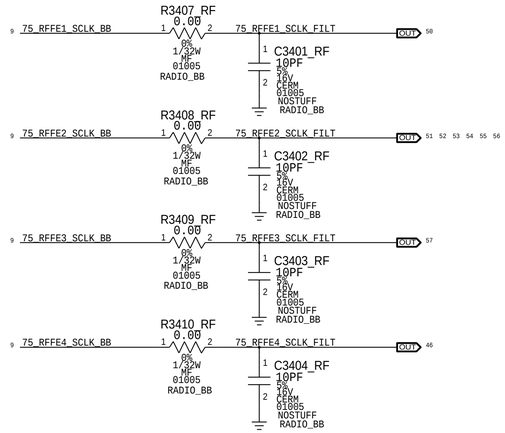


BUFFER ON RFFE5
SCLK/SDATA_A IS OUTPUT



PLACE C3405_RF CLOSE TO BUFFER
PLACE C3407_RF CLOSE TO MDM

RFFE CLOCK FILTERS



RFFE USAGE TABLE

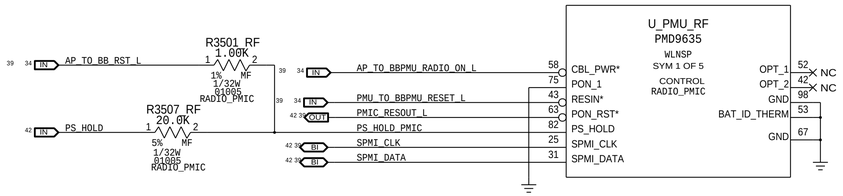
RFFE1 WTR
RFFE2 LB/MB/HB PAD, 2G PA, LB/MB/HB ASM
RFFE3 DIV ASM
RFFE4 QPOET
RFFE5 DIV LNA, ANT TUNERS

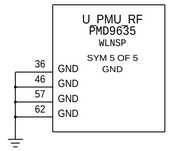
PMU: CONTROL AND CLOCKS

HW_REV2_ID	R3502	R3503	CONFIG
1.80V	698K	-	MLB
0.12V	698K	51.1K	SELF GEN

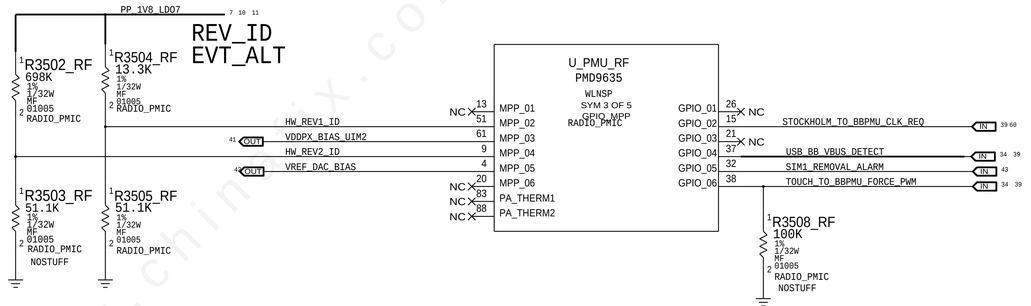
HW_REV_ID	R3504	R3505	REVISION
0.10V	887K	51.1K	DEV1
0.30V	255K	51.1K	DEV2
0.50V	124K	51.1K	DEV3
0.70V	82.5K	51.1K	DEV4/PROTOMLB1
0.90V	51.1K	51.1K	PROTOMLB2
1.10V	31.6K	51.1K	DEV5/PROTO1
1.20V	50K	100K	PROTO2
1.31V	39K	105K	EVT
1.43V	13.3K	51.1K	EVT_ALT
1.55V	8.25K	51.1K	CARRIER BUILD
1.63V	5.23K	51.1K	DVT
1.80V	10K	-	PVT

RESET AND CONTROL: PMU

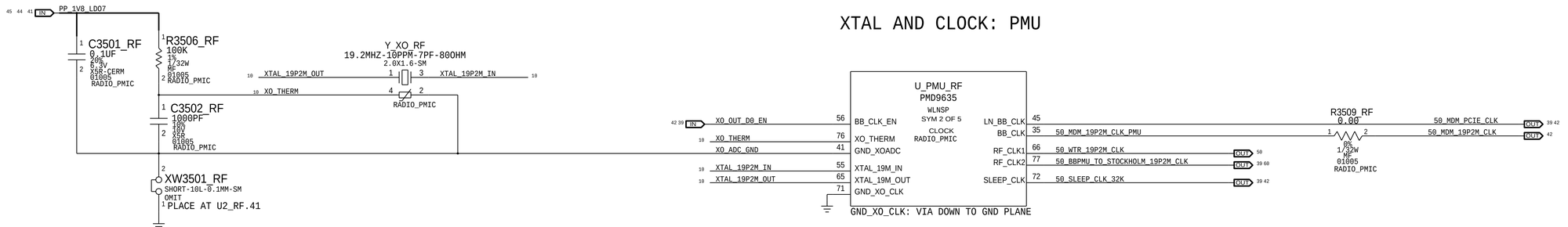




MPPS AND GPIOS: PMU



XTAL AND CLOCK: PMU



PMU: SWITCHERS AND LDOS

SWITCHERS BULK CAPS

I296
PP_VCC_MAIN → VBATT_S1
C3640_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3616_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3601_RF SHORT-10L-0.25MM-SM OMIT
XW3602_RF SHORT-10L-0.25MM-SM OMIT
XW3603_RF SHORT-10L-0.25MM-SM OMIT
S1_GND

I295
PP_VCC_MAIN → VBATT_S2
C3615_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3617_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3604_RF SHORT-10L-0.25MM-SM OMIT
XW3605_RF SHORT-10L-0.25MM-SM OMIT
S2_GND

I279
PP_VCC_MAIN → VBATT_S3
C3634_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC
C3618_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3606_RF SHORT-10L-0.25MM-SM OMIT
XW3607_RF SHORT-10L-0.25MM-SM OMIT
XW3608_RF SHORT-10L-0.25MM-SM OMIT
S3_GND

I275
PP_VCC_MAIN → VBATT_S4
C3619_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3609_RF SHORT-10L-0.25MM-SM OMIT
XW3610_RF SHORT-10L-0.25MM-SM OMIT
S4_GND

I274
PP_VCC_MAIN → VBATT_S5
C3620_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
XW3611_RF SHORT-10L-0.25MM-SM OMIT
XW3612_RF SHORT-10L-0.25MM-SM OMIT
S5_GND

U_PMU_RF
PMD9635
WLNSP
SYM 4 OF 5
POWER

VBATT_S1	5	VDD_S1	
	16	VDD_S1	
	6	GND_S1	
	17	GND_S1	
	28	GND_S1	
	33	GND_S1	
VBATT_S2	92	VDD_S2	
	103	VDD_S2	
S2_GND	102	GND_S2	
VBATT_S3	70	VDD_S3	
S3_GND	49	GND_S3	
	54	GND_S3	
VBATT_S4	8	VDD_S4	
	1	GND_S4	
	7	GND_S4	
VBATT_S5	94	VDD_S5	
S5_GND	93	GND_S5	
PP_1V225_SMPS2	86	VDD_L1_2_16	
PP_1V0_SMPS3	44	VDD_L3_4	
PP_1V85_SMPS4	14	VDD_L5_6_15	
	23	VDD_L7_8	
PP_1V0_SMPS5	89	VDD_L9	
PP_VCC_MAIN	90	VIN_VPH1	
	47	VIN_VPH2	
VDD_OTP	73	VDD_OTP	
MDM_VREF_LPDDR2	78	VREF_DDR	
AVDD_BYP	74	AVDD_BYP	
REF_BYP	79	REF_BYP	
	68	GND_REF	
	24	VDD_XO_RF	

VREG_S1	10		
VSW_S1	11		
VSW_S1	22		
VSW_S1	27		
VREG_S2	91		
VSW_S2	97		
VREG_S3	69		
VSW_S3	59		
VSW_S3	64		
VREG_S4	12		
VSW_S4	2		
VREG_S5	87		
VSW_S5	99		
VREG_L1	80	VOLTAGE=1.5V	MDM LOW VOLTAGE ANALOG
VREG_L2	81	VOLTAGE=1.2V	MDM EBI1, DDR CORE
VREG_L3	39	VOLTAGE=0.9V	MDM CORE
VREG_L4_16	48	VOLTAGE=0.95V	MDM PCIE
VREG_L5	19	VOLTAGE=1.7V	MDM HIGH VOLTAGE ANALOG
VREG_L6	3	VOLTAGE=1.8V	MDM 1.8V I/O, DDR, SHARED 1.8V VOLTAGE RAIL
VREG_L7	18	VOLTAGE=1.8V	MDM PLL
VREG_L8	29	VOLTAGE=1.8V	MDM LOW VOLTAGE USB
VREG_L9	100	VOLTAGE=1.0V	WTR
VREG_L10	84	VOLTAGE=3.075V	MDM HIGH VOLTAGE USB
VREG_L11	95	VOLTAGE=1.8V	UIM1
VREG_L12	85	VOLTAGE=2.7V	GPS LNA
VREG_L13	96	VOLTAGE=1.8V	UIM2
VREG_L14	101	VOLTAGE=2.8V	FRONT END SUPPLY
VREG_L15	30	VOLTAGE=1.8V	RFFE VIO
VREG_XO	34	VREG_XO	
GND_XO	40	VREG_XO_GND	
VREG_RF	60	VREG_RF_CLK	
GND_RF_CLK	50	VREG_RF_CLK_GND	

L3601_RF	1UH-20%-0.054OHM-3.4A	PP_VSW_S1	VOLTAGE=0.9V
L3602_RF	2.2UH-20%-0.14OHM-1.6A	PP_VSW_S2	VOLTAGE=1.225V
L3603_RF	1.0UH-20%-2.7A-0.056OHM	PP_VSW_S3	VOLTAGE=1.0V
L3604_RF	2.2UH-20%-0.14OHM-1.6A	PP_VSW_S4	VOLTAGE=1.85V
L3605_RF	2.2UH-20%-0.14OHM-1.6A	PP_VSW_S5	VOLTAGE=1.0V

MDM MODEM	3400MA	VOLTAGE=0.9V	C3609_RF 43UF 20% 4V X5R 0603 S1_GND	C3614_RF 43UF 20% 4V X5R 0603 NOSTUFF	
MDM MODEM		PP_0V9_SMPS1			OUT
TCXO SHUTDOWN: ON					
LOW VOLTAGE LDOS	587MA	PP_1V225_SMPS2	C3610_RF 43UF 20% 4V X5R 0603 S2_GND		
TCXO SHUTDOWN: ON		VOLTAGE=1.225V			OUT
MDM MEMORY, MDM USB	2234MA	PP_1V0_SMPS3	C3611_RF 43UF 20% 4V X5R 0603 S3_GND		
TCXO SHUTDOWN: ON		VOLTAGE=1.0V			OUT
HIGH VOLTAGE LDOS	653MA	PP_1V85_SMPS4	C3612_RF 43UF 20% 4V X5R 0603 S4_GND		
TCXO SHUTDOWN: ON		VOLTAGE=1.85V			OUT
LDO9->WTR	700MA	PP_1V0_SMPS5	C3613_RF 43UF 20% 4V X5R 0603 S5_GND		
TCXO SHUTDOWN: OFF		VOLTAGE=1.0V			OUT

TCXO SHUTDOWN: ON	PP_1V5_LDO1	OUT
TCXO SHUTDOWN: ON	PP_1V2_LDO2	OUT
TCXO SHUTDOWN: ON	PP_0V9_LDO3	OUT
TCXO SHUTDOWN: OFF	PP_0V95_LDO4	OUT
TCXO SHUTDOWN: ON	PP_1V7_LDO5	OUT
TCXO SHUTDOWN: ON	PP_1V8_LDO6	OUT
TCXO SHUTDOWN: OFF	PP_1V8_LDO7	OUT
TCXO SHUTDOWN: ON	PP_1V8_LDO8	OUT
TCXO SHUTDOWN: OFF	PP_1V0_LDO9	OUT
TCXO SHUTDOWN: ON	PP_3V075_LDO10	OUT
TCXO SHUTDOWN: ON	PP_UIM1_LDO11	OUT
TCXO SHUTDOWN: OFF	PP_2V7_LDO12	OUT
TCXO SHUTDOWN: ON	PP_UIM2_LDO13	OUT
TCXO SHUTDOWN: OFF	PP_2V8_LDO14	OUT
TCXO SHUTDOWN: OFF	PP_1V8_LDO15	OUT

C3621_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3622_RF 0.1UF 20% 6.3V X5R-CERM 01005 RADIO_PMIC
XW3613_RF SHORT-10L-0.1MM-SM OMIT
REF_BYP_GND
R3603_RF 0.00 0% 1/32W MF 01005
AVDD_BYP

C3624_RF 1UF 20% 10V X5R 0201 RADIO_PMIC NOSTUFF
C3625_RF 10UF 20% 6.3V CERM-X5R 0402-9 RADIO_PMIC
C3632_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3635_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC NOSTUFF
C3633_RF 15UF 20% 6.3V X5R 0402-1 RADIO_PMIC
C3636_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC NOSTUFF
C3603_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3626_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_PMIC
C3627_RF 10UF 20% 6.3V CERM-X5R 0402-9 RADIO_PMIC
C3605_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3606_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3629_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3608_RF 1UF 20% 10V X5R 0201 RADIO_PMIC
C3607_RF 1UF 20% 10V X5R 0201 RADIO_PMIC

VREG_XO → C3630_RF 1UF 20% 10V X5R 0201 RADIO_PMIC → VREG_XO_GND → XW3614_RF SHORT-10L-0.1MM-SM OMIT → XO_GND
VREG_RF_CLK → C3631_RF 1UF 20% 10V X5R 0201 RADIO_PMIC → VREG_RF_CLK_GND → XW3615_RF SHORT-10L-0.1MM-SM OMIT → RF_CLK_GND

PLACE XW CLOSE TO PMU
VIA XW DOWN TO THE GND PLANE

XW3616_RF OMIT SHORT-10L-0.25MM-SM: PP_0V9_SMPS1 → BB_TO_PMU_AMUX_SMPS1
XW3617_RF OMIT SHORT-10L-0.25MM-SM: PP_1V0_SMPS3 → BB_TO_PMU_AMUX_SMPS3
XW3618_RF OMIT SHORT-10L-0.25MM-SM: PP_1V85_SMPS4 → BB_TO_PMU_AMUX_SMPS4
XW3619_RF OMIT SHORT-10L-0.25MM-SM: PP_UIM1_LDO11 → BB_TO_PMU_AMUX_LDO11_SIM1

051-00094
4.0.0

36 OF 51
45 OF 60

PMU: ET MODULATOR

STAR ROUTING

60 59 54 52 51 45 39 34 IN PP_VCC_MAIN

C3701_RF
10UF
20%
6.3V
CERM-X5R
0402-9
RADIO_QPOET

CAN BE DELETED IF NEARBY
BULK CAPACITANCE IS
AVAIALBLE TO BE SHARED

L3702_RF
FERR-22-OHM-1A-0.055OHM
0201
RADIO_QPOET

PP_QPOET_BYP_BATT VOLTAGE=4.3V
PP_QPOET_VCC_PA VOLTAGE=4.3V
53 52 51 46 OUT

C3702_RF
10UF
20%
6.3V
CERM-X5R
0402-9
RADIO_QPOET

VOLTAGE=0.0V

XW3701_RF
SHORT-10L-0.25MM-SM
OMIT
PLACE AT U_QPOET_RF.27

L3701_RF
2.2UH-20%-0.3A-0.38OHM
0603
RADIO_QPOET

PP_VBATT_PA_BOOST
VOLTAGE=4.3V

U_QPT_RF
QFE1100
BGA
RADIO_QPOET

BYP_BATT	14	VDD_BATT	15
BYP_LOAD	10	VDD_BATT	16
VDD_BUCK	28	VDD_AMP	5
GND_BUCK	27	VDD_1P8	17
AMP_INP	7	VSW_BUCK	23
AMP_INM	2	AMP_OUT	4
SDATA	26	C_BUCK	11
SCLK	21	C_BUCK	12
MPP1	13	C_SW_BUCK	8
VSW_BOOST	20	C_SW_BUCK	9
USID_LSB	19	C_GSM	6
GND	22	PA_VBAT	18
GND_BOOST	24	VOUT_BOOST	25
		GND	1
		GND_AMP	3

42 IN ET_DAC_P
42 IN ET_DAC_N
43 39 BI 75_RFFE4_SDATA_BB
43 IN 75_RFFE4_SCLK_FILT
NC 13 MPP1

PP_QPOET_BUCK_GND

L3704_RF
FERR-22-OHM-1A-0.055OHM
0201
RADIO_QPOET

PP_QPOET_VDD_CLASS_AB_AMP VOLTAGE=4.0V
PP_QPOET_VDD_BOOST_OUT VOLTAGE=4.0V 12

C3705_RF
22UF
20%
10V
X5R-CERM
0603-1
RADIO_QPOET
GROUND CLOSE TO U4_RF.3

L3705_RF
120-OHM-210MA
01005
RADIO_QPOET

PP_1V8_QPOET_VDD VOLTAGE=1.8V
PP_1V8_LDO15 IN 36 39 43 45 51 52 53 54 55 56 57

C3706_RF
10UF
20%
6.3V
CERM-X5R
0402-9
RADIO_QPOET

L3703_RF
1.5UH-20%-1.7A-0.110HM
LQE2M_SM
RADIO_QPOET

PP_QPOET_VSW VOLTAGE=4.0V

PP_QPOET_APT_CAP_SWITCH_IN VOLTAGE=4.0V

C3707_RF
4.7UF
20%
6.3V
X5R-CERM1
402
RADIO_QPOET

PP_QPOET_VCC_PA VOLTAGE=4.3V
OUT 46 51 52 53

C3708_RF
470PF
10%
10V
X5R
01005
RADIO_QPOET
QPOET_CLASS_AB_AMP_SNUBBER
PLACE RC SNUBBER CLOSE TO U_QPOET_RF.4

R3703_RF
2.2
5%
1/32W
MF
01005
RADIO_QPOET
GROUND RESISTOR CLOSE TO U_QPOET_RF.3

PP_QPOET_VDD_BOOST_OUT 12

C3704_RF
10UF
20%
10V
X5R-CERM
0402-8
RADIO_QPOET

VOLTAGE=0.0V
PP_QPOET_BOOST_GND
ROUTE CAP GROUND BACK TO U_QPOET_RF.24

XW3702_RF
SHORT-10L-0.25MM-SM
OMIT
PLACE AT U_POET_RF.24

TRANSCEIVER: POWER

STAR ROUTING

OPEN ITEM: CAN R3801-R3805 AND C3809-C3813 BE DELETED?

45 IN

PP_1V0_LDO9

C3815_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_TRANSCEIVER

C3801_RF 4.7UF 20% 6.3V CER-X5R 0402 RADIO_TRANSCEIVER

R3801_RF 0 5% 1/20W MF 0201 RADIO_TRANSCEIVER

PP_VDD_RF1_TX_VCO VOLTAGE=1.0V 35MA

C3802_RF 0.1UF 10% 6.3V CERM-X5R 0201 RADIO_TRANSCEIVER

C3809_RF 27PF 5% 25V C0G 0201 RADIO_TRANSCEIVER NOSTUFF

R3802_RF 0 5% 1/20W MF 0201 RADIO_TRANSCEIVER

PP_VDD_RF1_TX VOLTAGE=1.0V 175MA

C3803_RF 0.1UF 10% 6.3V CERM-X5R 0201 RADIO_TRANSCEIVER

C3810_RF 27PF 5% 25V C0G 0201 RADIO_TRANSCEIVER NOSTUFF

XW3801_RF SHORT-10L-0.1MM-SM OMIT

PP_VDD_RF1_DIG VOLTAGE=1.0V 25MA

C3804_RF 0.1UF 10% 6.3V CERM-X5R 0201 RADIO_TRANSCEIVER

C3811_RF 27PF 5% 25V C0G 0201 RADIO_TRANSCEIVER NOSTUFF

XW3802_RF SHORT-10L-0.1MM-SM OMIT

PP_VDD_RF1_RX1 VOLTAGE=1.0V 40MA

C3805_RF 0.1UF 10% 6.3V CERM-X5R 0201 RADIO_TRANSCEIVER

C3812_RF 27PF 5% 25V C0G 0201 RADIO_TRANSCEIVER NOSTUFF

XW3803_RF SHORT-10L-0.1MM-SM OMIT

PP_VDD_RF1_RX2 VOLTAGE=1.0V 70MA

C3806_RF 0.1UF 10% 6.3V CERM-X5R 0201 RADIO_TRANSCEIVER

C3813_RF 27PF 5% 25V C0G 0201 RADIO_TRANSCEIVER NOSTUFF

U_WTR_RF
WTR3925
WLPSP
SYM 4 OF 5
PWR
RADIO_TRANSCEIVER

88 VDD_RF1_TVCO
67 VDD_RF1_TSIG
45 VDD_RF1_DIG
64 VDD_RF1_RX1
49 VDD_RF1_RX2
23 VDD_RF2_LDO
30 VDD_RF2

VDD_RF2_LDO_BYPASS

C3807_RF 1UF 20% 10V X5R 0201 RADIO_TRANSCEIVER

345MA

PP_1V85_SMPS4 IN 45

C3808_RF 0.47UF 20% 4V CERM-X5R-1 201 RADIO_TRANSCEIVER

C3814_RF 4700PF 10% 6.3V X5R 01005 RADIO_TRANSCEIVER

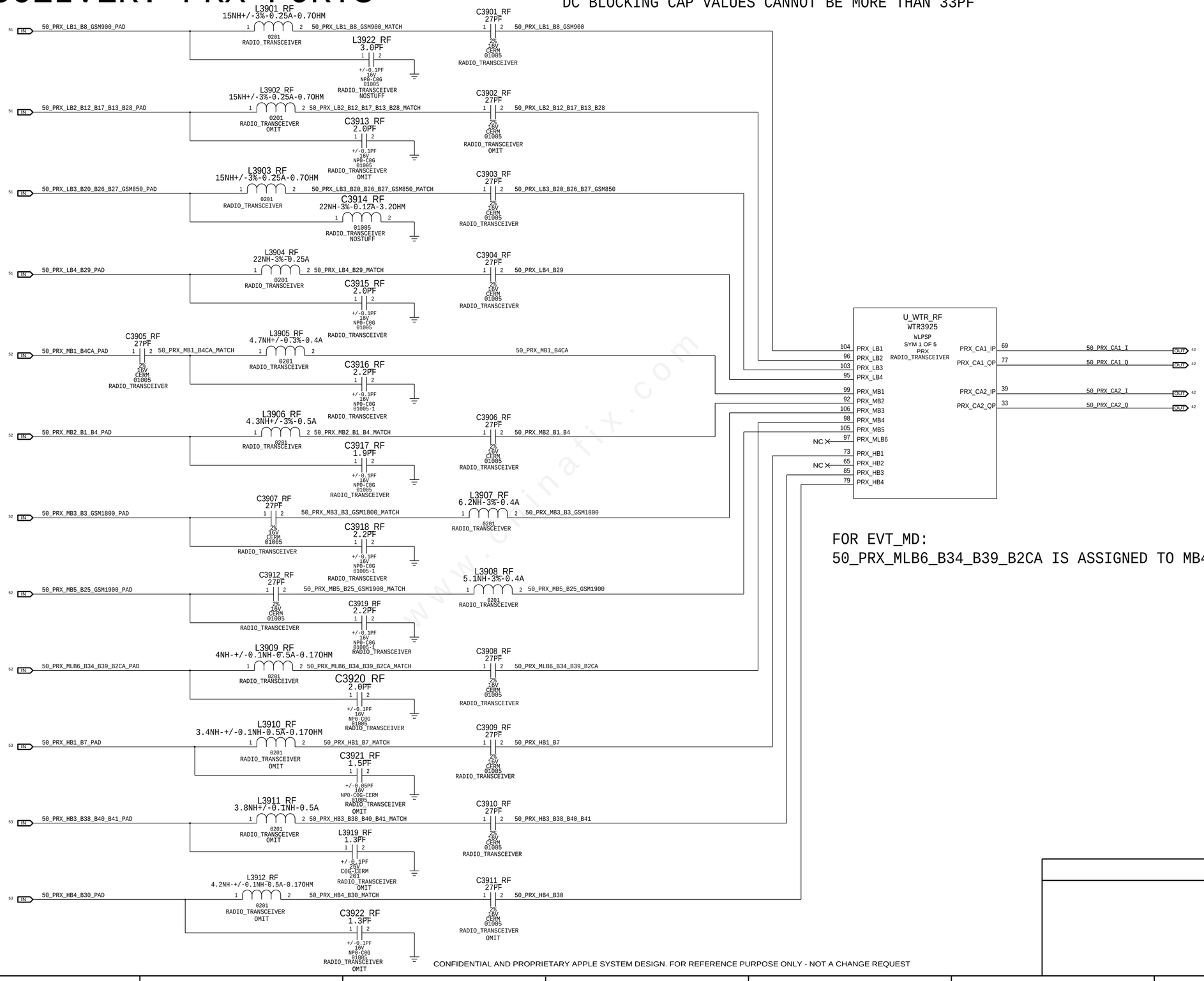
U_WTR_RF
WTR3925
WLPSP
SYM 5 OF 5
GND
RADIO_TRANSCEIVER

3 GND
58 GND
56 GND
42 GND
72 GND
28 GND
84 GND
21 GND
91 GND
20 GND
90 GND
19 GND
89 GND
102 GND
55 GND

94 GND
87 GND
81 GND
17 GND
52 GND
37 GND
36 GND
61 GND
53 GND
54 GND
57 GND
82 GND
83 GND
26 GND
27 GND
71 GND
63 GND
41 GND
48 GND
38 GND
25 GND
31 GND

TRANSCEIVER: PRX PORTS

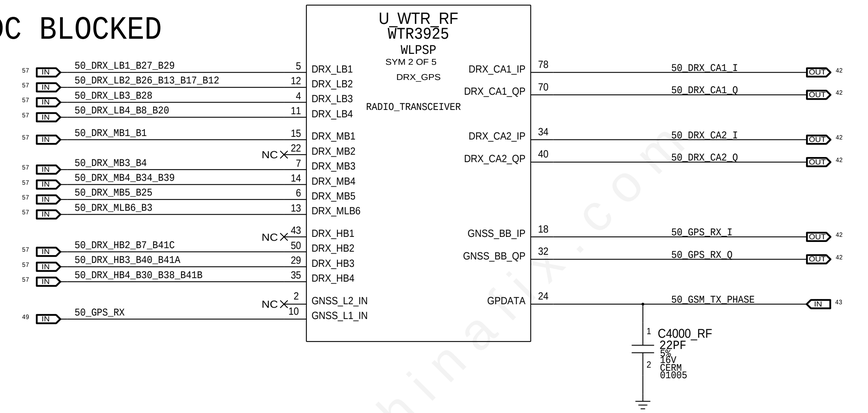
DC BLOCKING CAP VALUES CANNOT BE MORE THAN 33PF



FOR EVT_MD:
50_PRX_MLB6_B34_B39_B2CA IS ASSIGNED TO MB4

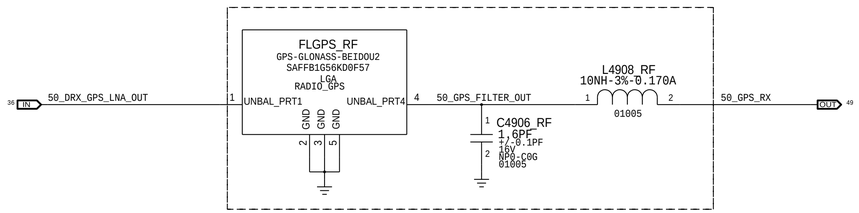
TRANSCEIVER: DRX/GPS PORTS

DRX MODULE PORTS ARE DC BLOCKED



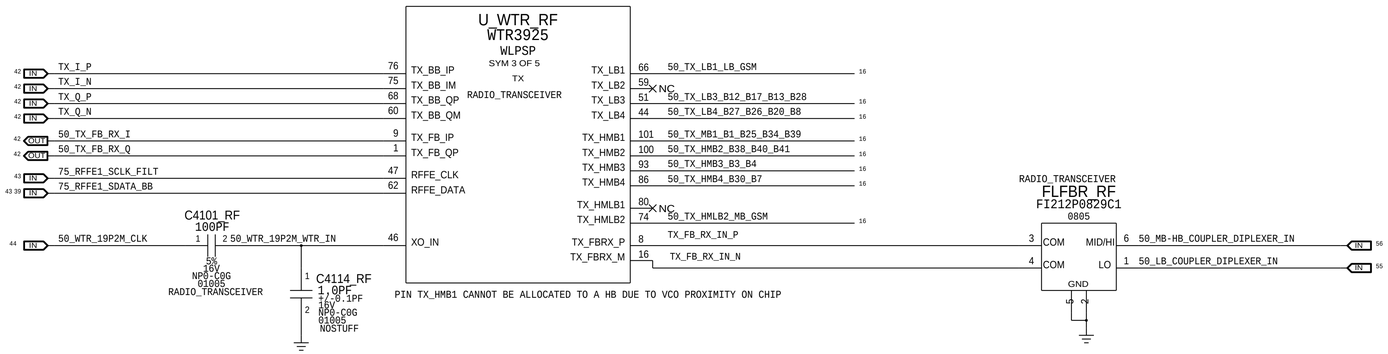
GPS FILTER

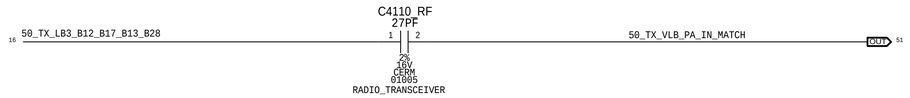
PLACE NEAR U_WTR

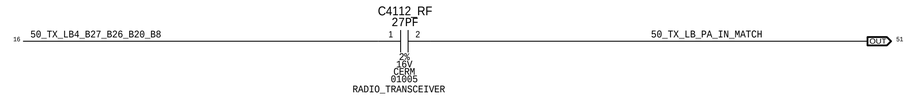


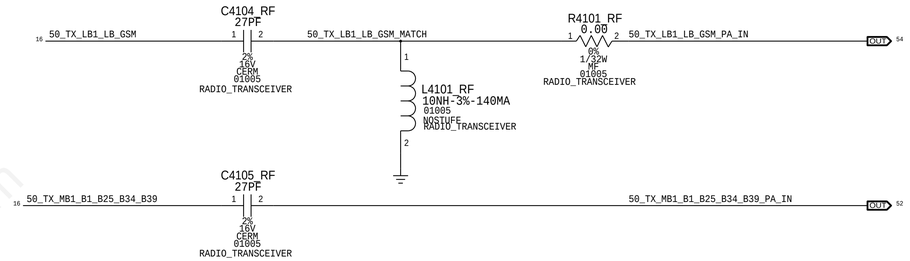
TRANSCEIVER: TX PORTS

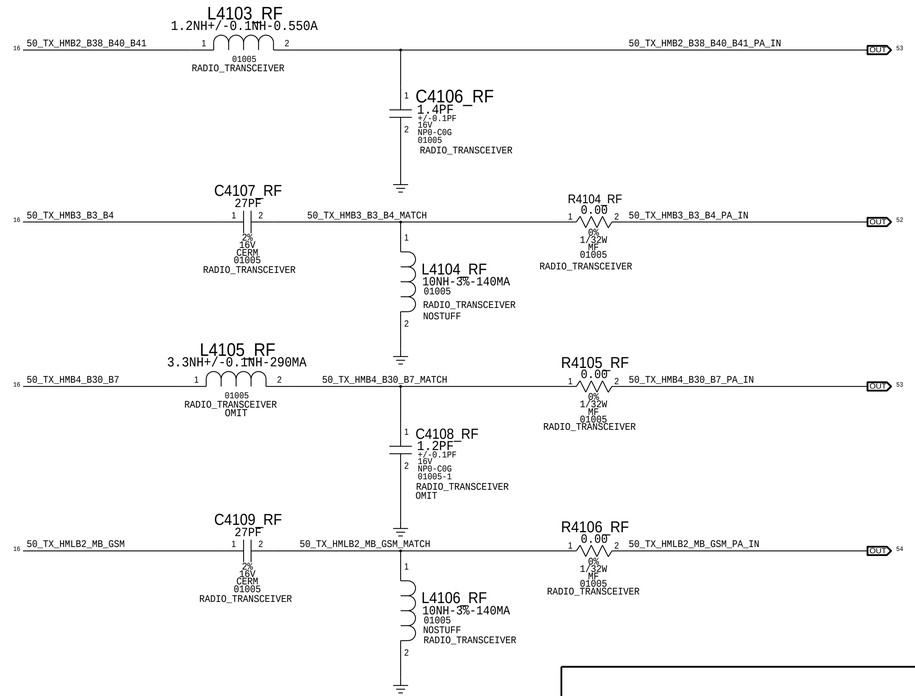
B12/13 TX INTERSTAGE FILTER REMOVED



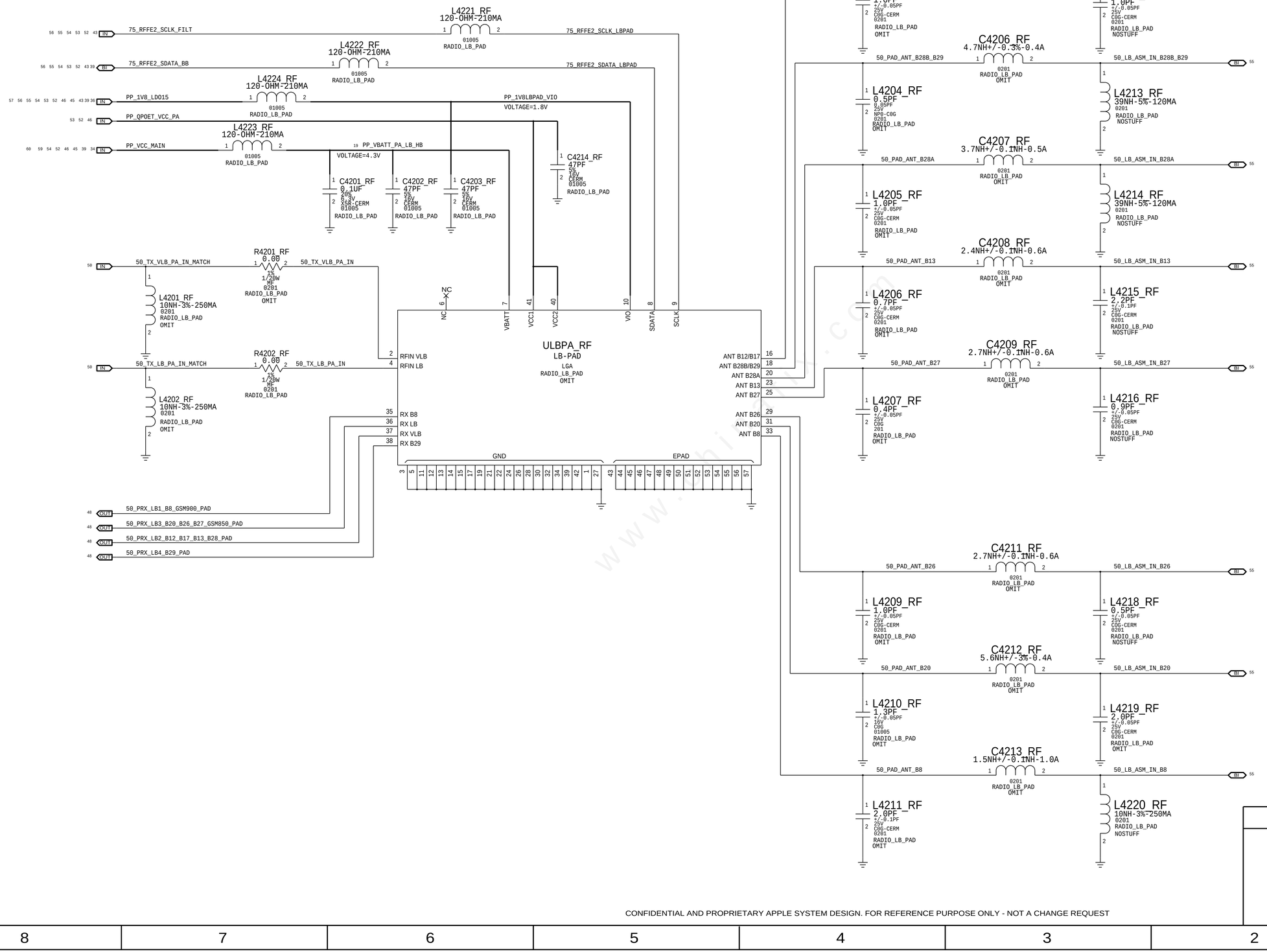




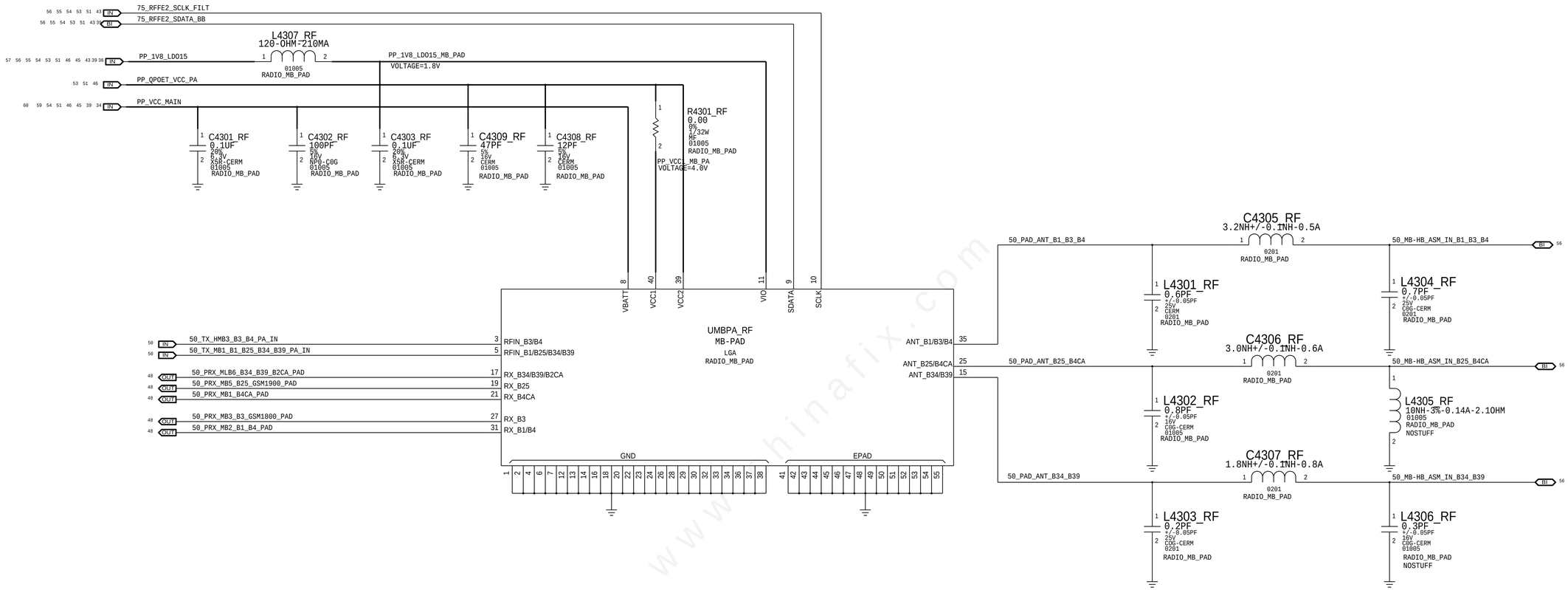




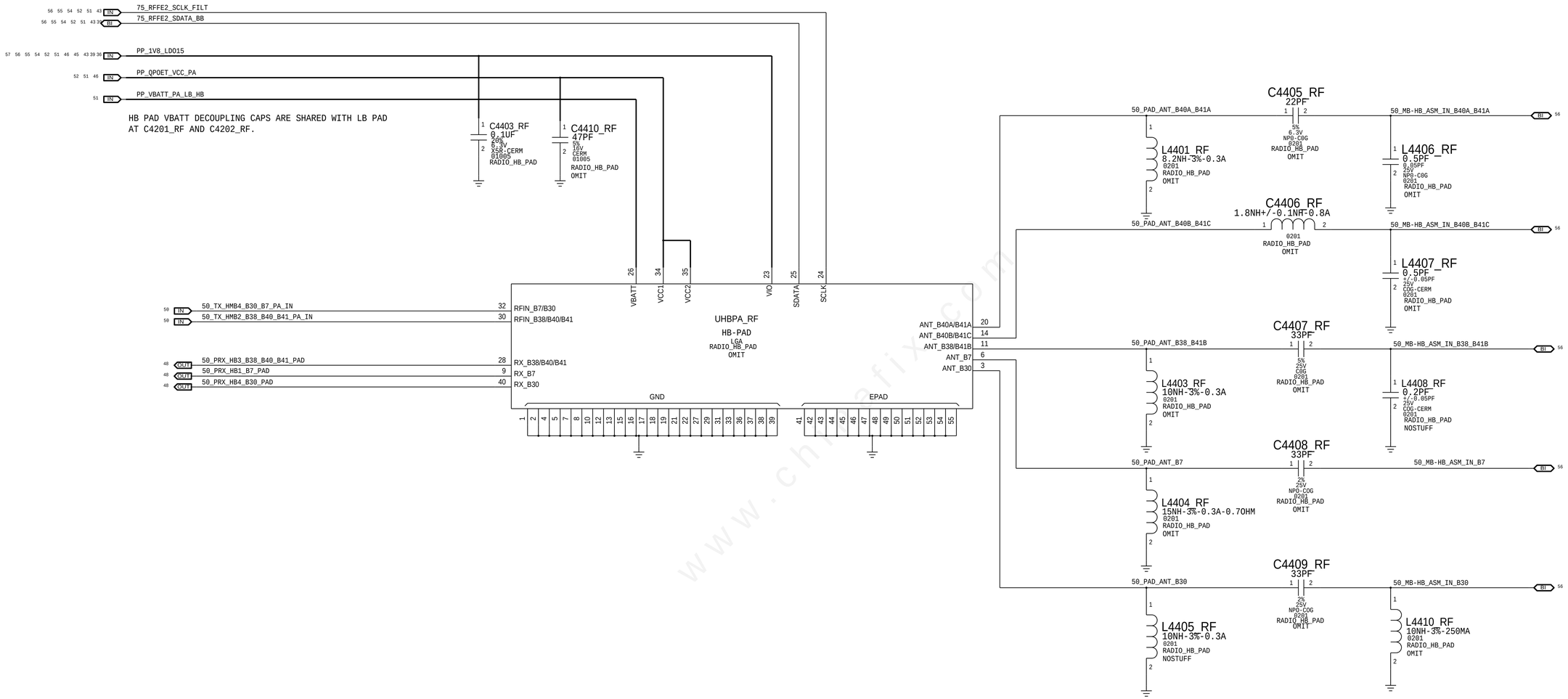
LOW BAND PA+DUPLEXERS



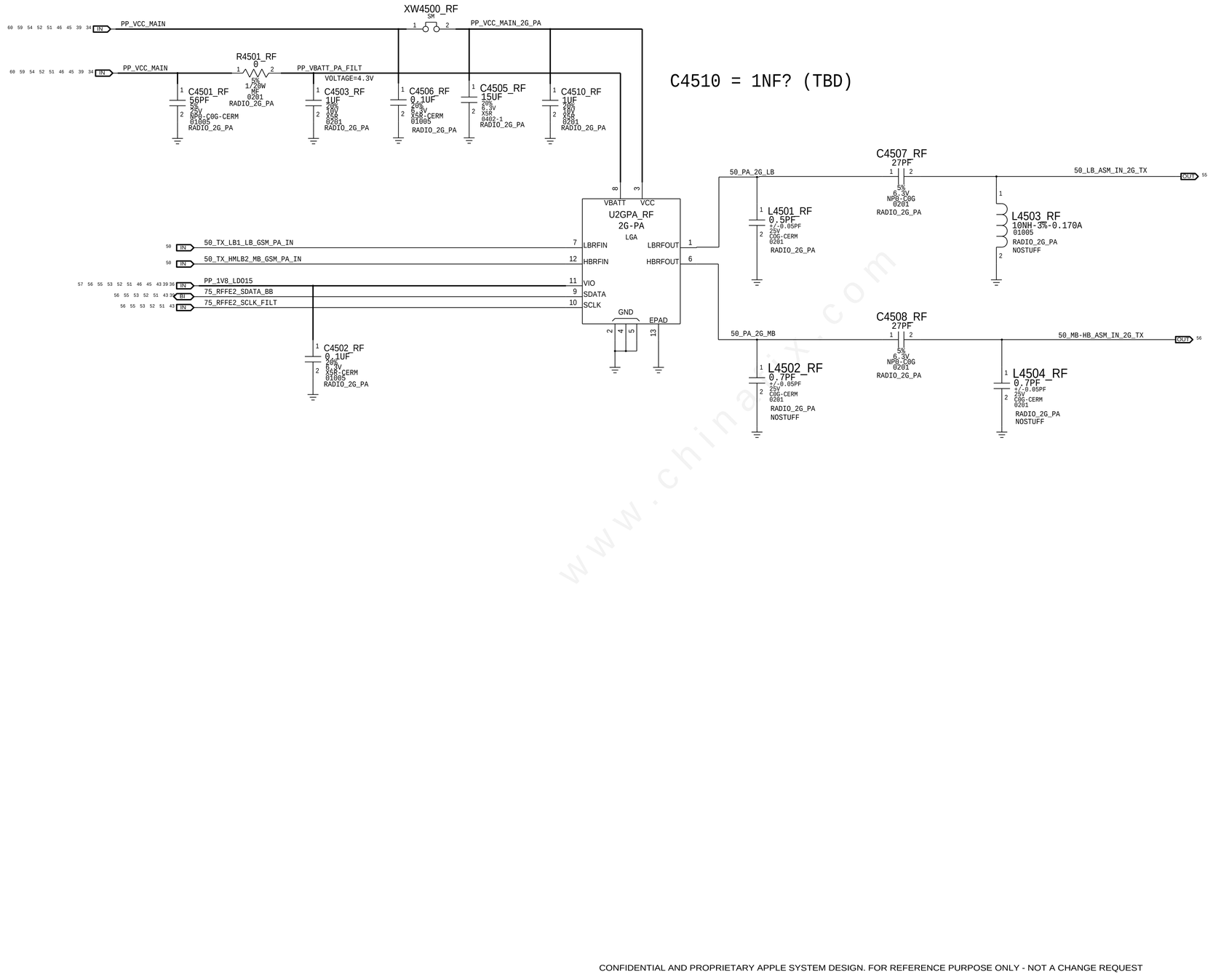
MID BAND PA+DUPLEXERS



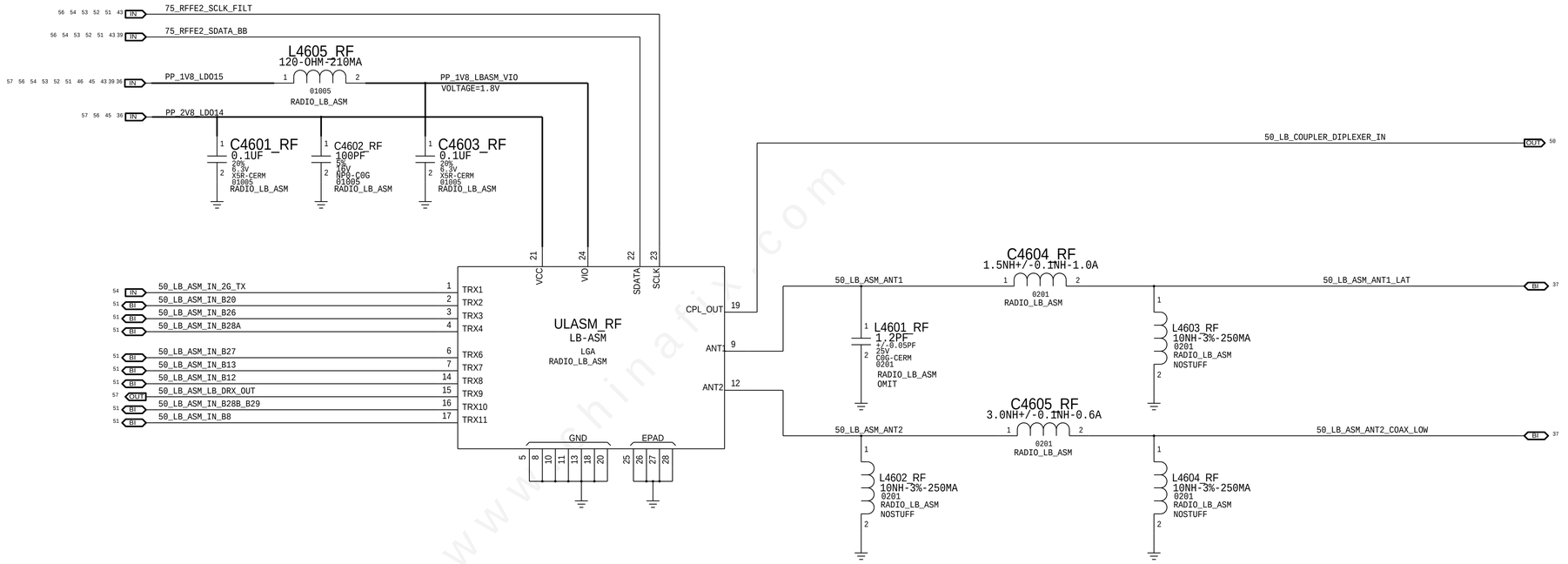
HIGH BAND PA+DUPLEXERS



2G PA

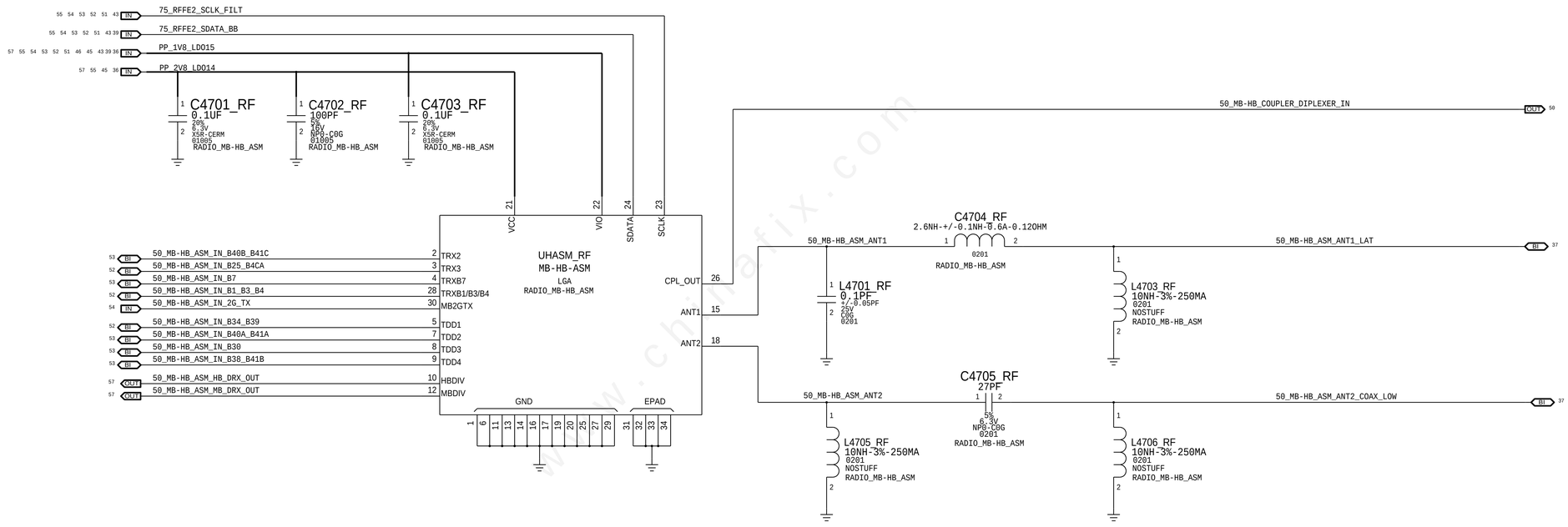


LOW BAND ANTENNA SWITCH MODULE

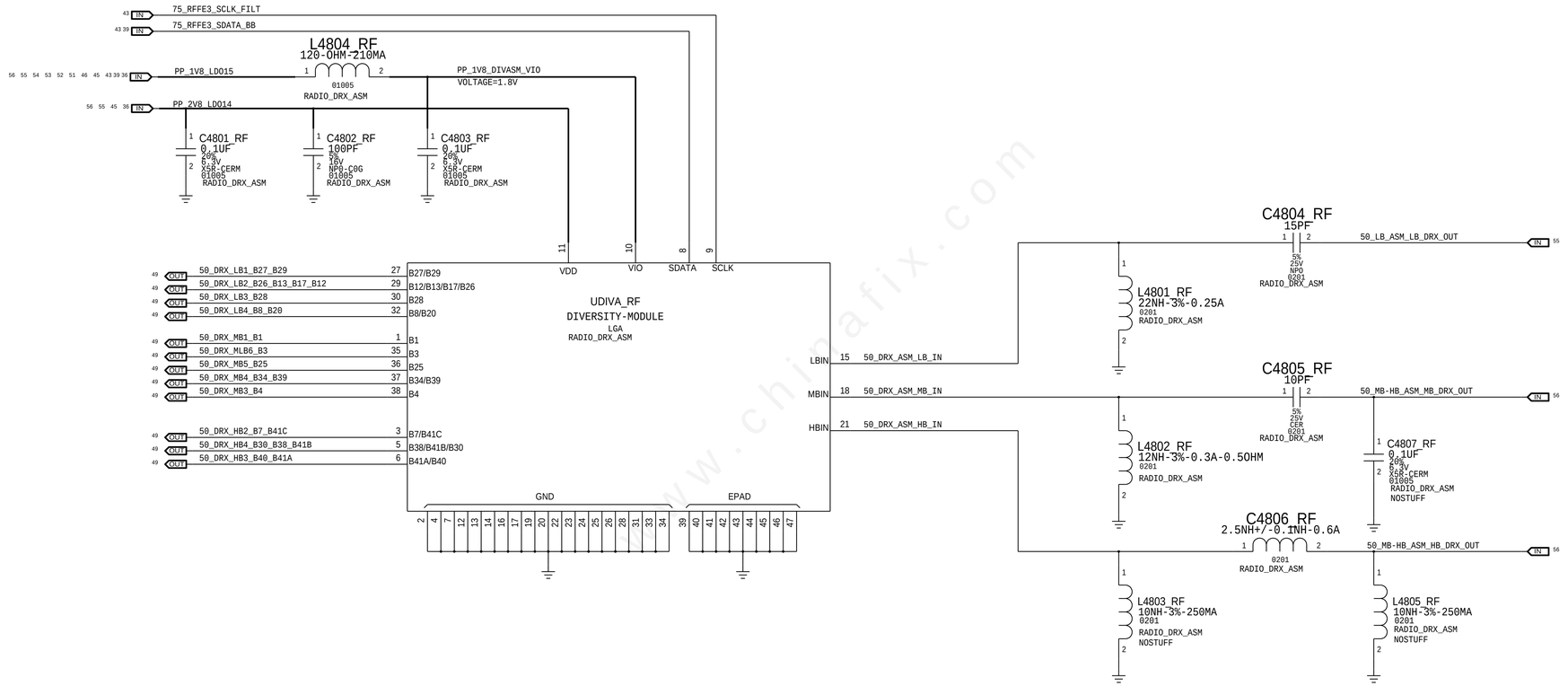


MID-HIGH BAND ANTENNA SWITCH MODULE

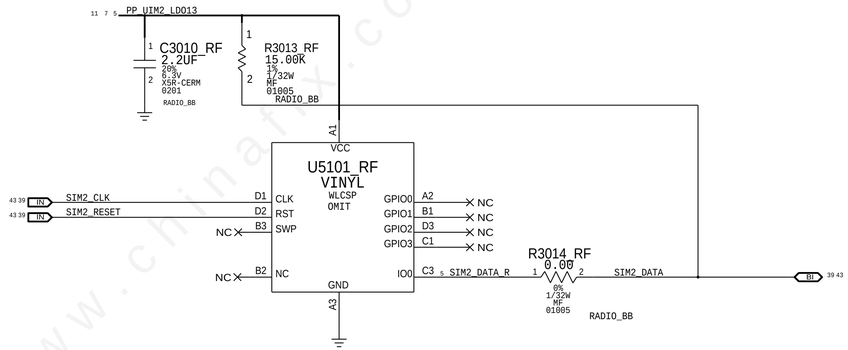
EVT ASM ASSIGNMENT:
B40B/B41C - TRX2
B30 - TDD3



DIVERSITY MODULE

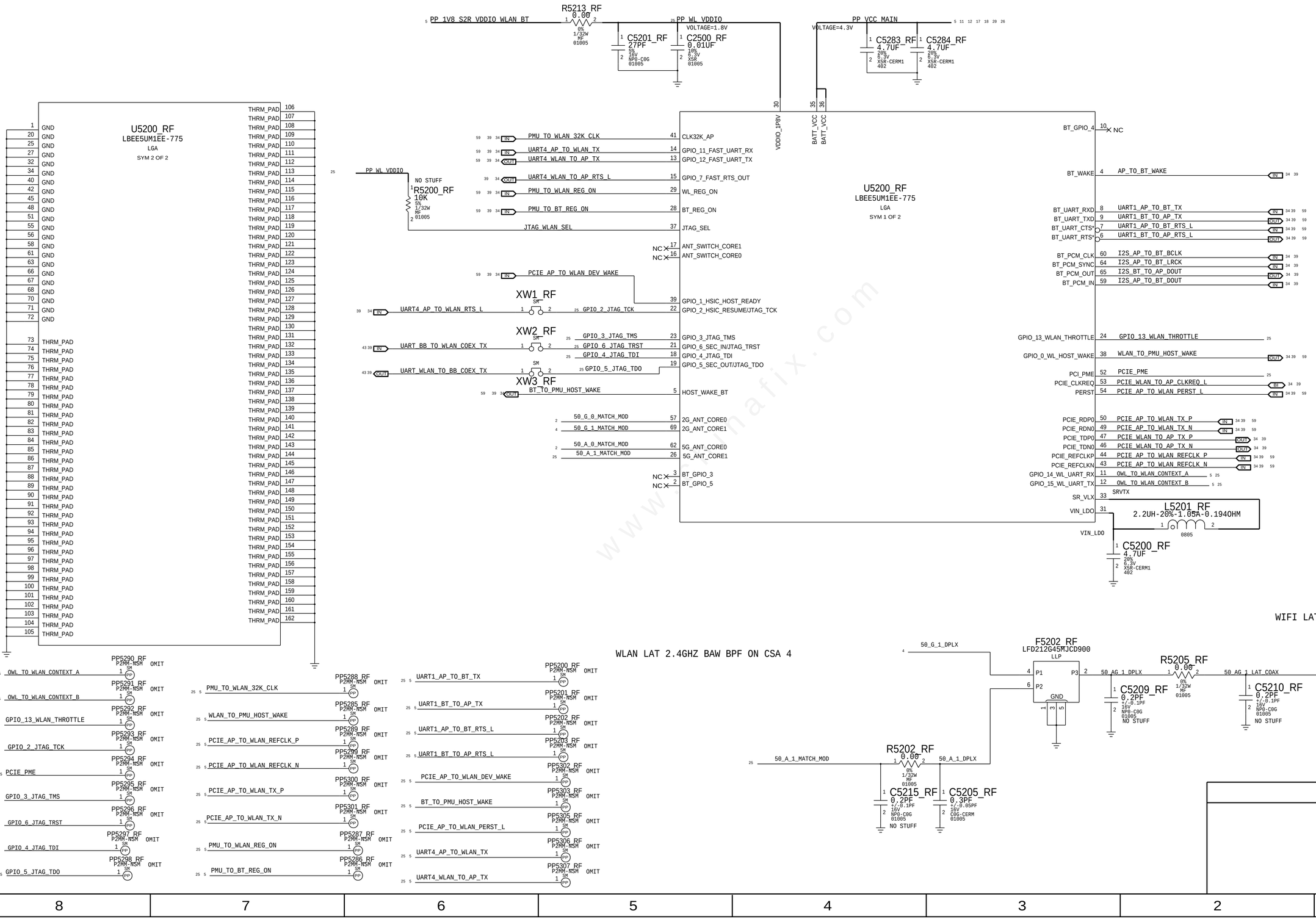


SIM



SIZE

WIFI/BT


U5200_RF
LBEE5UM1EE-775
LGA
SYM 2 OF 2
U5200_RF
LBEE5UM1EE-775
LGA
SYM 1 OF 2
R5213_RF
0.00
C5201_RF
27PF
C2500_RF
0.01UF
PP_WL_VDDIO
VOLTAGE=1.8V
PP_VCC_MAIN
VOLTAGE=4.3V
C5283_RF
4.7UF
C5284_RF
4.7UF
R5200_RF
10K
NO STUFF
PP_1V8_S2R_VDDIO_WLAN_BT
PMU_TO_WLAN_32K_CLK
UART4_AP_TO_WLAN_TX
UART4_WLAN_TO_AP_TX
UART4_WLAN_TO_AP_RTS_L
PMU_TO_WLAN_REG_ON
PMU_TO_BT_REG_ON
JTAG_WLAN_SEL
PCIE_AP_TO_WLAN_DEV_WAKE
UART4_AP_TO_WLAN_RTS_L
UART_BB_TO_WLAN_COEX_TX
UART_WLAN_TO_BB_COEX_TX
BT_TO_PMU_HOST_WAKE
XW1_RF
XW2_RF
XW3_RF
GPIO_2_JTAG_TCK
GPIO_3_JTAG_TMS
GPIO_6_JTAG_TRST
GPIO_4_JTAG_TDI
GPIO_5_JTAG_TDO
50_G_0_MATCH_MOD
50_G_1_MATCH_MOD
50_A_0_MATCH_MOD
50_A_1_MATCH_MOD
CLK32K_AP
GPIO_11_FAST_UART_RX
GPIO_12_FAST_UART_TX
GPIO_7_FAST_RTS_OUT
WL_REG_ON
BT_REG_ON
JTAG_SEL
ANT_SWITCH_CORE1
ANT_SWITCH_CORE0
GPIO_1_HSIC_HOST_READY
GPIO_2_HSIC_RESUME/JTAG_TCK
GPIO_3_JTAG_TMS
GPIO_6_SEC_IN/JTAG_TRST
GPIO_4_JTAG_TDI
GPIO_5_SEC_OUT/JTAG_TDO
HOST_WAKE_BT
2G_ANT_CORE0
2G_ANT_CORE1
5G_ANT_CORE0
5G_ANT_CORE1
BT_GPIO_3
BT_GPIO_5
VDDIO_1P8V
BATT_VCC
BATT_VCC
BT_GPIO_4
NC
BT_WAKE
AP_TO_BT_WAKE
BT_UART_RXD
BT_UART_TXD
BT_UART_CTS*
BT_UART_RTS*
UART1_AP_TO_BT_TX
UART1_BT_TO_AP_TX
UART1_AP_TO_BT_RTS_L
UART1_BT_TO_AP_RTS_L
BT_PCM_CLK
BT_PCM_SYNC
BT_PCM_OUT
BT_PCM_IN
I2S_AP_TO_BT_BCLK
I2S_AP_TO_BT_LRCK
I2S_BT_TO_AP_DOUT
I2S_AP_TO_BT_DOUT
GPIO_13_WLAN_THROTTLE
GPIO_0_WL_HOST_WAKE
WLAN_TO_PMU_HOST_WAKE
PCI_PME
PCIE_CLKREQ
PERST
PCIE_CLKREQ_L
PCIE_AP_TO_WLAN_PERST_L
PCIE_RDP0
PCIE_RDN0
PCIE_TDP0
PCIE_TDN0
PCIE_REFCLKP
PCIE_REFCLKN
PCIE_AP_TO_WLAN_TX_P
PCIE_AP_TO_WLAN_TX_N
PCIE_WLAN_TO_AP_TX_P
PCIE_WLAN_TO_AP_TX_N
PCIE_AP_TO_WLAN_REFCLK_P
PCIE_AP_TO_WLAN_REFCLK_N
GPIO_14_WL_UART_RX
GPIO_15_WL_UART_TX
OWL_TO_WLAN_CONTEXT_A
OWL_TO_WLAN_CONTEXT_B
SRVTX
SR_VLX
VIN_LDO
L5201_RF
2.2UH-20%-1.05A-0.194OHM
C5200_RF
4.7UF
PP5290_RF
PP5291_RF
PP5292_RF
PP5293_RF
PP5294_RF
PP5295_RF
PP5296_RF
PP5297_RF
PP5298_RF
PP5288_RF
PP5285_RF
PP5289_RF
PP5299_RF
PP5300_RF
PP5301_RF
PP5287_RF
PP5286_RF
PP5200_RF
PP5201_RF
PP5202_RF
PP5203_RF
PP5302_RF
PP5303_RF
PP5305_RF
PP5306_RF
PP5307_RF
OMIT
WLAN LAT 2.4GHZ BAW BPF ON CSA 4
WIFI LAT COAX CONNECTOR
F5202_RF
LFD212G45MJCD900
LLP
R5205_RF
0.00
C5209_RF
0.2PF
C5210_RF
0.2PF
JWLAT_RF
MM5829-2700
F-ST-SM1
R5202_RF
0.00
C5215_RF
0.2PF
C5205_RF
0.3PF
50_G_1_DPLX
50_A_1_DPLX
50_A_1_MATCH_MOD
50_G_1_LAT_COAX
NO STUFF

STOCKHOLM

ALL NETNAMES NEED TO BE CHECKED

INSTALL R5312 AND REMOVE R5311
WHEN VINYL PRESENT

U5302_RF
WLCSP
FAN48614BUC50X

L5303_RF
1.8UH-0.7A
0603

U5301_RF
PN66V
UFLGA

Q5301_RF
DMP22D4UFA
DFN0806

T5301_RF
ATB201206F-20011
0805

TP5301_RF

L5301_RF
160NH-10%-0.48A-0.33OHM
0402

L5302_RF
160NH-10%-0.48A-0.33OHM
0402